No. 18 Septembre 1959



Ministère de l'Agriculture

ENTOMOLOG E et PHYTOPATHOLOGIE APPLIQUEES

Publication du Département Général pour la protection des Plantes et Quarantine

Avec Coopération du Bureau Général des Informations et Relations Publipues

TEHRAN - IRAN

Taban press

SOMMAIRE

نشریهٔ اداره کل بررسی آفات نباتی وقرنطینه پس‌ازمدتی‌تعطیل اینك دوباره‌انتشار میابد . اداره کنندگان نشریه امیدوارند بتوانند با انتشار مرتب مجله خدمتی را که جامعه بآنها محول کرده‌است انجام دهند. دراین نشریه ازمسائل زیربحث میشود :

۱ـ نتیجه مطالعات کارشناسان اداره کل بررسیها در زمینه طبقه‌بندی ، بیولوژی ، اکولوژی وطرز مداوا ودفع بیماریها وآفات نباتی.

۲ـ آخرین اطلاعات درباره سموم شیمیائی که دردفع آفات‌نباتی موردمصرف‌دارند.

۳ـ نظریات واطلاعات‌مربوط به‌قرنطینه نباتی.

در سالهای گذشته مجموعاً ۱۷ شماره از نشریه مورد بحث در ۷۳۱ صفحه بچاپ رسیده‌است وبرای مزید استحضار علاقمندان بهمراه شماره ۱۸ فهرستی ازمجموع مطالبی که تاکنون ازطرف این اداره چاپ شده تنظیم و تقدیم خوانندگان عزیزمیگردد. نشریه حاضر عیناً نظیر سایر انتشارات وزارت کشاورزی مجانی‌است وبرای مؤسسات علمی‌داخلی و خارجی کارشناسان ومتخصصین بیماریها وآفات نباتی وافراد علاقمند مجاناً فرستاده میشود .

ازشماره‌های قدیم مجله قسمتی ازشماره ۸ تا ۱۷ در کتابخانه اداره موجود است و بدیهی‌است بمحض وصول تقاضا بآدرس متقاضی فرستاده میشود .

برای اطمینان از وصول مرتب نشریه لطفاً برگ منضم را تکمیل و بآدرس زیر ارسال فرمایند :

Plant Protection Research Department and Plant Quarantine

Ministry of Agriculture, Tehran, Iran.

Dear Sir,

The "Entomologie et Phytopathologie Appliquées" is a quarterly journal published both in French & Persian languages by Plant Protection Research Dep. & Plant Quarantine of the Ministry of Agriculture of Iran.

This periodical deals mainly with Taxonomy, Biology, Ecology and control of the economically important insects of Iran, and already 17 volumes with pages total of 731 have been published since June 1948. This publication is free of eharge and any Entomological institution can obtain it preferably on exchange basis. A limited number of sets containing volumes 8 to 17 of this journal are now available.

Institutions interested in receiving this periodical may fill out the attached form and send it back to this office. The list of the other publications of this service which have been published is also enclosed.

Please address all correspondence to:

Director,
Plant Protection Research Department & Plant Quarantine
Ministry of Agriculture,
Tehran - Iran.

We should like very much to be placed on your mailing list for any free publications which you normally send to other libraries.

Thanking you very much.

Pour tout renseignement concernant la prèsente publication prière de s'adresser au Département Général des Recherches pour la Protection des Plantes et Quarantine, Ministère de l'Agriculture, Khiaban Saadi, Tehran (Iran).

Liste des Articles dans les Numéros déjà Publiés de «l'Entomologie et Phytopathologie Appliquées»

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No. 9 Décembre 1949

No. 12 et 13 Juin 1951

No. 14 Juin 1954

Par : H. Mirzayan

LISTE DES ORTHOPTERES ET LEURS DISTRIBUTION EN IRAN

(Les espèces plus ou moin nuisibles aux différentes cultures, au point de vue économique, sont soulignées)

I - Superfam. Acridodea

A - Fam. TETRIGIDAD

Subfam. TETRIGINAE

1 - Genre *Hedotettix I. Bol.*

H. ALIENUS Uv. — Kerman, Baloutchestan, Khorassan, Sistan.

2 - Genre *Tettrix Latr.*

T. BOLIVARI Saulcy — Nord de l'Iran.

T. DEPRESSA Bris. — Nord et Ouest de l'Iran : Tehran.

3 - Genre *Paratettix I. Bol.*

P. UVAROVI Sem. — Nord de l'Iran

P. OBLITERATUS IRANICUS B. — Bienko — Lorestan, Khouzestan, Kerman, Baloutchestan.

P. HISTRICUS (Stal) — Sistan, Baloutchestan.

P. IRANICA Uv. — Tehran.

4 - Genre *Ergatettix Kirby.*

E. DORSIFERUS (Walk.) — Kerman.

B - Fam. ACRIDIDAE

Subfam. CATANTOPINAE

1 - Genre *Uvarovium Dirsh.*

U. DIRSHI Uv. — Sud - Est de l'Iran.

U. FEMORALE Mistsh. — Khorassan.

2 - Genre *Dericorys Serv.*

D. ALBIDULA Serv. — Dacht_Gorgan, Nord du Khorassan, Baloutchestan, Kerman.

D. TIBIALIS (Pall.) — Dans la plupart des régions du pays.

D. ANNULATA ANNULATA (Fieb.) — Kerman, Baloutchestan.

D. UVAROVI IRANICA Mistsh. — Yazd, Fars, Abbassi.

D. CYRTOSTERNA Uv. — Kerman méridional. Baloutchestan.

D. XENOSTERNA Uv. —Khorassan, Kerman méridional.

D. VITREA B.—Bienko—Baloutchestan méridional (Ghasr_ghand, Pichin).

3 _ Genre *Farsinella B. - Bienko*

F. UVAROVI B.—Bienko _ Baloutchestan, Kerman méridional.

F. PREDTETSHENSKII B.—Bienko _ Baloutchestan, Kerman méridional.

4 _ Genre *Diexis Zub.*

D. VARENTZOVI SALSOLAE Mistsh. — Nord du Khorassan.

5 _ Genre *Iranella Uv.*

I. EREMIAPHILA Uv. — Sistan, Sud du Khorassan, Semnan, Damghan, Baloutchestan.

I. RUGOSA Shum. — Kerman : Bahramdjerd.

6 _ Genre *Iraniobia B. - Bienko*

I. PAVLOVSKII B.—Bienko _ Baloutchestan : Saravan; Bampocht.

I. MESOPTERA B.—Bienko _ Baloutchestan : Saravan.

I. ZARUDNYII B.—Bienko _ Baloutchestan : Khach; Zahedan.

I. SALAVATIANI B.—Bienko _ Baloutchestan : Saravan.

I. ELBURSIANA Ramme. — Semnan : Noukeh.

7 _ Genre *Miramia Uv.*

M. PERPOLITA Uv. — Bandar - Abbass, Kerman .

8 _ Genre *Oxya Serv.*

O. NITIDULA (Walk.) — Sud _ Est de l'Iran. Nuisible dans les rizières.

9 _ Genre *Tropidopola Stal.*

T. CYLINDRICA OBTUSA Uv. — Khouzestan, Abbassi.

T. CYLINDRICA IRANICA Uv. — Sistan, Baloutchestan, Kerman.

T. TURANICA TURANICA Uv. — Nord du pays. Sur les côtes de la mer Caspienne

10 _ Genre *Paraconophyma Uv.*

P. NANA Pop. — Fars : Sisakht; Komehr; Kakan.

P. PUSILLA B.—Bienko _ Komehr.

11 _ Genre *Anacridium Uv.*

A. AEGYPTIUM AEGYPTIUM (L.)— Dans la plupart des régions du pays.

Nuisible aux cultures potagères, les plantes fouragères les, arbustes.

A. AEGYPTIUM RUBRISPINUM B. — Bienko — Baloutchestan.

12 — Genre *Schistocerca Stal.*

SCH. GREGARIA Forsk. — Cette espèce migratrice envahit l'Iran pendant les années d'invasions. Les dégâts sont serieux aux plantes cultivées, aux arbres fruitiers et forestiers. Les criquets pèlerin viennent à notre pays vers d' Arabie et Pakistan. Il y a une nouvelle invasion qui a commencée du printemps 1958.

13 — Genre *Catantops Schaum*

C. SAUCIUS Burm. — Fars méridional : Lar.

C. AXILLARIS Tarb. — Sud de Kerman : Bandar - Abbas.

14 — Genre *Calliptamus Serv.*

C. TURANICUS Tarb. — Nord — Est de l'Iran. Nuisible aux plantes potagères, surtout au cotonnier.

C. BALUCHA Uv. — Baloutchestan.

C. ITALICUS (L.) — Dans la plupart des régions septentrionales, centrales et occidentales.

C. TENUICERCIS Tarb. — Nord — Ouest et Ouest de l'Iran.

C. BARBARUS CEPHALOTES F. — W. — Presque dans la plupart des régions du pays. Nuisible aux différentes cultures.

C. PERSA Uv. — Nord de l'Iran : Ghazvin.

15 — Genre *Metromerus Uv.*

M. COELESYRIENSIS COELESYRIENSIS (G. — T.) — Les régions Centrales et Occidentales de l'Iran. Peu nuisible aux céréales.

M. COELESYRIENSIS ANGUSTAE (Uv.) — Nord — Ouest de l'Iran.

M. COELESYRIENSIS INTRICATUS Mistsh. — Nord — Est, Est et Ouest de l'Iran.

16 — Genre *Sphodromerus (Stal)*

S. UNDULATUS UNDULATUS Kirby — Baloutchestan : Sarbaz.

S. LUTEIPES LUTEIPES Uv. — Khorassan septentrional : Damghan, Semnan et Tehran.

S. LUTEIPES RUBRIPES Uv. — Sud — Est de l'Iran.

17 — Genre *Sphodronotus Uv.*

SPH. CYCLOPTERUS Uv. — Baloutchestan, Abbassi.

SPH. GRANDIS Pop. — Baloutchestan, Abbassi.

18 - Genre *Acorypha* Kr. (syn : *Caloptenopsis* I. Bol.)

A. INSIGNIS Walk. — Bandar - Abbass, Fars : Lar.

19 - Genre *Thisoicetrinus* Uv.

TH. PTEROSTICHUS (F. - W.) — Dans la plupart des régions de l'Iran. Nuisible aux cultures potagères et les plantes fouragères.

20 - Genre *Thisoicetrus* Br. - W.

TH. ADSPERSUS Redt. — Nord de l'Iran. Nuisible aux cotonniers et les plantes fouragères.

TH. BITUBERCULATUS B.—Bienko - Nord de l'Iran : Varamin (Tehran).

TH. THEODORI DELICATUS Mistsh. — Nord du pays.

TH. LITTORALIS SIMILIS (Br. - W.) — Dans la plupart des régions de l'Iran. Nuisible aux plantes potagères ainsi qu'au cotonnier.

TH. PERSA Uv. — Sud - Est du pays.

TH. ANNULOSUS ANNULOSUS (Walk.) — Sud - Est de l'Iran.

21 - Genre *Euprepocnemis* Fieb.

EU. PLORANS (Charp.) — Nord de l'Iran : Gorgan, Guilan, Mazandaran, Azarbaïdjan. Peu nuisible dans les rizières.

EU. ALACRIS ALACRIS (Serv.) — Sud - Est de l'Iran.

EU. ALACRIS IMPICTUS Uv. — Sud - Ouest de l'Iran.

22 - Genre *Dinaria* Pop.

D. MIRZAYANI Pop. — Fars : Kakan et Komehr.

23 - Genre *Esfandiaria* Pop.

E. OBESA Pop. — Fars : Sisakht, Yasoudj.

24 - Genre *Wiltshirella* Pop.

W. FUSIFORMIS Pop. — Fars : Sineh - sphid.

25 - Genre *Lyrotylus* Uv.

L. PERSICUS Uv. —Fars : Chiraz; Kakan.

L. MODESTUS B. —Bienko - Fars.

L. KERMANICUS Shum. — Kerman : Bardsir; Lalezar.

26 - Genre *Lyrotyloides* B. - Bienko

L. VIRIDIS B - Bienko - Sud - Est de l'Iran : Kerman : Bam: Sabzevaran (Djiroft)

Subfam. PYRGOMORPHINAE

1 _ Genre *Pyrgomorpha Serv.*

P. CONICA DESERTI B.—Bienko _ Nord, Ouest, et Sud - Ouest, les régions Centrales de l'Iran. Peu nuisible aux cultures potagères ainsi qu'au cotonnier.

P. GUENTHERI Burr. — Nord, Ouest et les régions Centrales de l'Iran.

2 _ Genre *Pyrgomorphella I. Bol.*

P. PREDTETSHENSKII B.—Bienko - Ouest de l'Iran : Arak, Hamadan, Kordestan.

3 _ Genre *Atractomorpha Sauss.*

A. EXTERNA B. — Bienko - Sud - Ouest de l'Iran : Baloutchestan.

4 _ Genre *Chrotogonus Serv.*

CH. ROBERTSI Kirby—Kerman, Baloutchestan. Cette espèce est nuisible dans les différentes cultures.

5 _ Genre *Tenuitarsus I. Bol.*

T. EVANSI (Uv.) — Baloutchestan.

Subfam. PAMPHAGINAE

1 _ Genre *Eremopeza Sauss.*

E. SAUSSUREI CYANEA B.—Bienko - Khorassan, Kerman.

E. SAUSSUREI SAUSSUREI (Uv.) —Azarbaïdjan, Kordestan, Hamadan, Esfahan, Fars.

E. SAUSSUREI VIOLACEA (Uv.) — Fars, Kerman, Esfahan, les régions Centrales.

E. CINERASCENS CINERASCENS (Uv.) — Khorassan, Guilan, les régions Centrales.

E. CINERASCENS VIRESCENS (Uv.) — Ghom, Kachan, Tehran, Fars, Baloutchestan.

E. FESTIVA (Sauss.) — Nord de l'Azarbaïdjan.

E. GIBBERA LATA (Uv.) — Nord - Ouest de l'Iran.

E. GIBBERA REDUCTA (Uv.) — Fars, Kermanchah, Khouzestan.

E. BICOLORIPES (Mor.) — Khorassan.

E. GIGAS (Kirby) — Khorassan, Baloutchestan, Kerman, Fars, Esfahan.

2 _ Genre *Eremotmethis Uv.*

E. CARINATUS (Fabr.) — Chahroud, Khorassan, Baloutchestan, Kerman, les régions Centrales.

3 - Genre *Iranotmethis Uv.*

I. CYANIPENNIS CYANIPENNIS (Sauss.) — Ouest de l'Iran : Khouzestan.

I. CYANIPENNIS KURDUS B.—Bienko - Kordestan.

I. CYANIPENNIS CYANIPES B.—Bienko - Ghazvin - Tehran.

I. PERSA PERSA (Sauss.) — Azarbaïdjan : Rezaïeh.

I. PERSA ZAGROSI (Uv.) — Kordestan, Kermanchah, Khouzestan.

I. LUTEIPES B.—Bienko - Kachan.

4 - Genre *Eremocharis Sauss.*

E. SUBSULCATA (Stal.) — Khorassan : Chahroud.

E. GRANULOSA KHORASSANA Uv.—Khorassan, Sistan, Kerman, Baloutchestan.

E, GRANULOSA BAMPURA Uv. — Baloutchestan : Bampour.

5 - Genre *Melanotmethis Uv.*

M. FUSCIPENNIS UNICOLOR (Uv.) — Nord du Khorassan.

M. FUSCIPENNIS FUSCIPENNIS (Uv.) — Nord du Khorassan.

6 - Genre *Asiotmethis Uv.*

A. TURRITUS (F. - W.) — Azarbaïdjan, Gorgan, Nord du Khorassan.

A. ARTEMISIANUS Shum. — Khorassan : Neichabour.

7 - Genre *Tmethis Uv.*

T. PULCHRIPENNIS ASIATICUS Uv. — Ouest de l'Iran : Lorestan, Kermanchah, Mehran.

8 - Genre *Thrinchus F. - W.*

TH. ARENOSUS ARENOSUS B.—Bienko - Khorassan : Torbat - heidari.

9 - Genre *Strumiger Zub.*

S. DESERTORUM PERSA Uv. — Khorassan, Kerman.

10 - Genre *Tropidauchen Sauss.*

T. VIRIDIS B.—Bienko - Ouest de l'Iran : Kordestan.

T. SERRATUM Mistsh. — Nord du Gorgan.

T. CRISTATUM Mistsh. — Arak : Farahan.

T. FLAVIPES Mistsh. — Semnan.

T. PREDTETSHENSKII Mistsh — Arak : Farahan.

T. MARGINATUM I Bol — Fars : Kakan.

11 - Genre *Saxetania Mistsh.*

S. SABULOSA (Uv.) — Kermanchah.

S. ESCALERAI I. Bol. — Kordestan, Fars : Firouzabad.

S. ALEXANDROVI B.—Bienko - Fars.

S. ELBURSIANA (Ramme.) — Nord de l'Iran : Chahkouh.

S. PARAMONOVI (Dirsh.) — Gorgan.

S. ONEROSA Mistsh. — Khorassan : Torbat - heydari.

S. MURICATA MURICATA Mistsh. — Khorassan : Torbat - heyari.

S. MURICATA FEMORALIS Mistsh. — Khorassan : Torbat - heydari.

S. CULTRICOLLIS CULTRICOLLIS (Sauss.) — Chahroud.

S. NIZVAI (Dirsh.) — Elburz : Alt. 2600 mètres.

S. IRRASA Mistsh. — Machad.

S. DECUMANA Mistsh. — Sud - Est du Khorassan,

S. AELLENI (Dirsh.) — Kerman : Kouh _ hezar, Fars : Chiraz; Beiza.

S. SPINOSA Mistsh. — Chahroud.

12 _ Genre *Ananothrotes Mistsh.*

A. FIEBERI (Br. - W.) — Nord - Ouest de l'Iran

13 _ Genre *Paranothrotes Mistsh.*

P. GOTVENDICUS GOTVENDICUS (I - Bol.) — Ouest de l'Iran : Kordestan ; Kermanchah.

P. GOTVENDICUS RECTUS Mistsh. — Ouest de l'Iran : Kordestan, Kermanchah.

P. OCELLATUS Mistsh. — Ouest de l'Iran : Kordestan.

P. TENUICORNIS TENUICORNIS Mistsh. — Nord de l'Iran : Elburz, Chahroud.

P. TENUICORNIS SORDIDUS Mistsh. — Tehran (Elburz.)

P. OPACUS OPACUS (Br. - W.) — Azarbaïdjan.

P. OPACUS MARGARITAE (Mir.) — Nord - Ouest de l'Iran.

P. OPACUS ORNATUS Mistsh. — Azarbaïdjan : Sabalan; Gharadagh.

P. OPACUS NIGRIPES (Stshelk.) — Azarbaïdjan.

P. OPACUS SHELKOVNIKOVI (Uv.) — Azarbaïdjan : Maragheh (Mont. Sabalan).

P. OPACUS APICALIS (I. Bol.) — Ouest de l'Iran.

P. CITIMUS Mistsh. — Kordestan (Mont. Ouraman).

P. DIAMESUS B.—Bienko - Baloutchestan : Zahedan.

14 _ Genre *Nocaracris Uv.*

N. CYANIPES (F. - W.) — Azarbaïdjan.

15 _ Genre *Paranocaracris Mistsh.*

P. RUBRIPES (F. - W.) — Nord de l'Iran.

16 - Genre *Savalania Mistsh.*

S. PULLA Mistsh. — Azarbaïdjan : Sabalan; Ghotoursou.

17 - Genre *Nocarodes F. - W.*

N. URMIANUS URMIANUS Ramne. — Azarbaïdjan.

N. URMIANUS CARINATUS Mistsh. — Azarbaïdjan.

N. SPECIALIS Mistsh. — Semnan, Varamin.

N. FRAGOSUS Mistsh. — Azarbaïdjan : Djolfa.

N. SCABIOSUS Mistsh. — Azarbaïdjan : Tabriz.

N. SERICOLLIS SERICOLLIS F. - W. — Azarbaïdjan.

N. NANUS Mistsh. — Azarbaïdjan : Arax; Gharadagh.

N. CORRUGATUS Mistsh. — Azarbaïdjan : Gharasou.

N. CRISPUS Mistsh. — Azarbaïdjan : Maragheh.

N. HUMEROSUS Mistsh. — Ghom, Arak : Farahan.

N. GIBBOSUS Mistsh. — Arak : Farahan.

18 - Genre *Bufonocarodes Mistsh.*

B. ROBUSTUS Mistsh. — Ouest de l'Iran : Arak; Farahan.

B. INTRICATUS Mistsh. — Azarbaïdjan : Tabriz-

19 - Genre *Iranacris Mistsh.*

I. DENTATUS Mistsh. — Ouest de l'Iran : Arak; Farahan.

Subfam EGNATIINAE

1 - Genre *Egnatioides Voss.*

E. COERULANS B. — Bienko - Kerman, Baloutchestan : Bampour.

E. FARSISTANICUS Uv. — Fars, Kermanchah (Ghasr - chirin).

E. KIRITSHENKOI Uv. — Khorassan : Chahroud.

E. SPHAERIFER B. — Bienko - Khorasan : Chahroud, Semnan.

2 - Genre *Egnatius Stal.*

E. APICALIS Stal. — Nord de l'Iran.

3 - Genre *Charora Sauss.*

CH. CRASSIVENOSA Sauss. — Mont. Elburz.

CH. PERSA PERSA Uv. — Tehran (Mont. Elburz).

CH. PERSA SIMILIS B. — Bienko - Tehran (Mont. Elburz).

CH. PERSA RUGOSA B. — Bienko - Ghom.

CH. KURDA Uv. — Kordestan.

CH. ZARUDNYII Uv. — Kordestan

4 _ Genre *Paregnatius Uv.*

P. MORITZI Uv. Khorassan.

P. SALAVATIANI Pop. — Fars : Komehr - Kakan.

P. SALTATOR B. — Bienko - Korassan.

5 _ Genre *Leptoscirtus Sauss.*

L, ISPHAHANICUS Uv. — Esfahan.

Subfam. ACRIDINAE

1 _ Genre *Acrida L.*

A. OXYCEPHALA Pall. — Presque dans la plupart des règions de l'Iran. Peu nuisible aux plantes potagères et fouragères.

A. EXALTATA Walk. — Iran Méridional.

2 _ Genre *Truxalis Fabr.*

(Syn : ACRIDELLA I. Bol.)

T. ROBUSTA Uv. — Presque dans la plupart des régions du pays. Peu nuisibld aux plantes potagéres et fouragères.

T. MESOPOTAMICA Dirsh ? — Garmsar : Dacht - kavir.

3 _ Genre *Gonista I. Bol.*

G. SAGITTA Uv. — Nord de l'Iran.

G. ROTUNDATA Uv. — Est et Sud de l'Iran.

4 _ Genre *Aswatthamanus Kirby.*

A. IRANICUS Uv. — Sud - Est l'Iran : Baloutchestan, Kerman.

5 _ Genre *Kirmania Uv.*

K. EXILIS Uv. — Sud - Est de l'Iran : Kerman.

6 _ Genre *Ochrilidia Stal.*

(Syn : PLATYPTERNA Fieb.)

O. VARIOPICTA (Salfi) — Baloutchestan, Kerman.

O. PERSICA (Salfi) — Nord de l'Iran.

O. OBTUSA (Salfi) — Ouest de l'Iran.

O. AFFINIS (Salfi) — Sud - Est de l'Iran.

O. UVAROVI (Salfi) — Sud - Ouest du pays.

O. FILICORNIS ORIENTALIS Uv. — Baloutchestan : Saravan.

O. PICTIPES Uv. — Baloutchestan : Saravan.

7 _ Genre *Duroniella I. Bol.*

D. GRACILIS Uv. — Nord du pays.

D. LUCASI I Bol. — Sud de l'Iran.

D. KOSTYLEVI B. — Bienko - Sud de l'Iran.

D. IRANICA B. — Bienko - Sud de Iran.

D. LAEVICEPS Uv. — Sud - Ouest de l'Iran.

D. VOLUCRIS Uv. — Sud - Ouest de l'Iran.

8 _ Genre *Pararcyptera Tarb.*

(Syn : ARCYPTERA Jac.)

P. MICROPTERA (F. — W.) TRANSCAUCASICA (Uv.) — Distribué dans les régions septentrionales. Peu nuisible aux cultures.

9 _ Genre *Ramburiella I. Bol.*

R. TURCOMANA (F. - W.) — Dans la plupart des régions du pays. Nuisible aux céréales.

R. FOVEOLATA Tarb. — Est et Nord du Khorassan.

R. BOLIVARI (Kuthy) — Nord du pays, Fars.

10 _ Genre *Stenohippus Uv.*

S. MUNDUS (Walk.) — Khouzestan, Kerman, Baloutchestan.

11 _ Genre *Dociostaurus Fieb.*

D. (s. str.) CENEI OCSK. — Ouest de l'Iran : Kermanchah,

D. (s. str.) MAROCCANUS Thunb. — Fars : Lar, Fassa, Djahrom, Darab, Kazé - roun (Farrachband). Khouzestan (Behbahan). Azarbaïdjan (Moghan). Mazan - daran (Chahi - Behchahr). Dacht - Gorgan. Khorassan septentrional (Dacht - Danial, Safiabad, surtout Sarakhs). Kermanshah (Mehran, Ghasr - chirin, Naft-chah, Soumar). Kerman (Abbassi : Saadatabad - Gahkom).

Cette espèce au-dessus. Le criquet marocain attaque serieusement aux champs de céréales, causant des dégâts énormes.

D. (s. str.) BREVICOLLIS Ev. — Azarbaïdlan : Moghan.

D. (s. str.) TARTARUS Uv. — Nord du Khorassan, Gorgan et Azarbaïdjan. Cette espèce est nuisiblc dans les champs de céréales aux pieds de montagnes.

D. (s. str.) KURDUS Uv. — Kordestan.

D. (s. str.) PLOTNIKOVI Uv. – Nord du pays. Dans la région du Safiabad (Sabzevar) ce petit criquet attaque aux céréales.

D. (Stauronotulus Tarb.) HAUENSTEINI (I. Bol.)–Dans la plupart des régions Septentrionales, occidentales et méridionales.
Ce criquet attaque queluefois les champs de céréales aux piedmonts.

D. (S.) HAUENSTEINI ELBURSIANUS Uv –Nord - Ouest de l'Iran : Elburz.

D. (S.) KRAUSSI (Ingen.) NIGROGENICULATUS Tarb. – Dans les régions Septentrionales. Nuisible aux cultures céréales non irriguées.

D. (S.) DIANESUS B.–Bienko - Baloutchestan : Khach, Goucheh,

12 – Genre *Notostaurus B. - Bienko*

N. ANATOLICUS (Kr.)–Cette espèce est distribée presque dans la plupart des régions de l'Iran. Peu nuisible aux céréales dans les piedmonts.

N. ALBICORNIS ALBICORNIS (Ev.) – Nord de l'Iran : Azarbaïdjan, Gorgan, nord du Khorassan.

N. ALBICORNIS TURCMENUS (Uv.) – Nord de l'Iran : Azarbaïdjan, Gorgan, Nord du Khorassan.

13 – Genre *Mizonocara Uv.*

M. INORNATA INORNATA Mistsh. – Nord de l'Iran.

14 – Genre *Eremippus Uv.*

E. GUTTATUS GUTTATUS Mistsh. – Nord de l'Iran : Ghazvin, Semnan.

E. GUTTATUS NOTIUS Mistsh. – Nord du Khorassan.

15 – Genre *Parapleurus Fisch.*

P. ALLIACEUS (Germ.) TURANICUS Tarb. – Nord de l'Iran.

16 – Genre *Stenobothrus Fisch.*

S. (STENOBOTHRODES Tarb.) WERNERI Ad. – Nord - Ouest du pays.

17 – Genre *Stauroderes I. Bol.*

S. SCALARIS (F. - W.) DEMAVENDI Pop. – Elburz : 66 Kilomètres Nord - Ouest de Tehran (Alt. 2500 mètres.)

18 – Genre *Chorthippus Fieb.*

CH. BRUNNEUS BRUNNEUS (Thunb.)–Dans la plupart des régions du pays, surtout au Nord. Nuisible aux plantes potagères et fouragères.

CH. MOLIS MOLIS (charp.) – Nord du pays.

CH. MOLIS ELBURSIANUS Mistsh. — Nord - Ouest de l'Iran : Elburz.

CH. SAVALANICUS Uv. — Azarbaïdjan : Sabalan.

CH MACROCERUS MACROCERUS (F. - W.) — Nord de l'Iran.

CH. LORATUS (F. - W.) — Nord du pays.

CH. DORSATUS DICHROUS (Ev.) — Nord du l'Iran.

CH. ALEOMARGINATUS KARELINI (Uv.) — Nord du pays.

CH. JUCUNDUS ELBURSIANUS B.—Bienko - Nord - Ouest de l'Iran (Elburz).

19 _ Genre *Euchorthippus Tarb.*

EU. TRANSCAUCASICUS TARB. — Nord de l'Iran. Peu nuisible aux plantes fouragères.

20 _ Genre *Xenocheila Uv.*

X. ZARUDNYI Uv. — Nord de l'Iran : Tehran, Semnan.

Subfam. OEDIPODINAE

1 _ Genre *Aiolopus Fieb.*

A. THALASSINUS (F.)—Presque dans la plupart des régions de l'Iran Nuisible aux plantes potagères et fouragères.

A. SAVIGNYI (Krauss.) — Sud de l'Iran.

A STREPENS (Latr.) — Nord de l'Iran. Nuisible aux plantes potagères et fouragères.

2 _ Genre *Hilethera Uv.*

H. TURANICA Uv. — Nord de l'Iran.

H. MACULATA (Karny) — Nord de l'Iran.

H. AIOLOPOIDES Uv. — Sud du pays.

3 _ Genre *Locusta L.*

L MIGRATORIA L. (solitaria) — Presque dans la plupart des régions de l'Iran. Nuisible aux cultures potagères, ainsi qu'au cotonnier.

4 _ Genre *Oedaleus Fieb.*

O. DECORUS Germ. — Presque dans la plupartdes régions de l'Iran, surtout au nord. Nuisible aux plantes potagères, ainsi qu'au cotonnier.

O. SENEGALENSIS Kr. — Il se trouve surtout au Sud de l'Iran. Nuisible aux cultures surtout au cotonnier.

5 _ Genre *Scintharista Sauss.*

SC. NOTABILIS PALLIPES Uv. — Khorassan méridional, Baloutchestan.

SC. NOTABILIS BRUNNERI Sauss. — Dans les régions Septentrionales.

6 _ Genre *Pyrgodera F. - W.*

P. ARMATA (F. - W.) — Très étendues dans les différents régions du pays. Il attaque plus ou moin les champs de céréales et les plantes fouragères aux piedmonts.

7 _ Genre *Brunnerella Sauss.*

B. MIRABILIS MIRABILIS Sauss. — Nord de l'Iran.

B. MIRABILIS SIAZOVI Mor. — Nord - Est de l'Iran : Khorassan

8 _ Genre *Celes Sauss.*

C. VARIABILIS CARBONARIUS Uv. — Azarbaïdjan.

9 _ Genre *Mioscirtus Sauss.*

M. WAGNERI WAGNERI Kitt. (ab. varentzovi Zub.) — Dans la plupart des régions Septentrionales de l'Iran.

M. WAGNERI ROGENHOFERI (Sauss.) — Dans les régions du Nord.

10 _ Genre *Oedipoda Latr.*

O. MINIATA (Pall) — Presque dans la plupart des régions de l'Iran. Nuisible aux cultures, surtout dans les pays montagneux.

O. SCHOCHI Sauss. — Nord du pays.

O. COERULESCENS (L.) — Iran Septentrional et Occidental. Nuisible aux plantes potagères, ainsi qu'au cotonnier

11 _ Genre *AgroTylus Fieb.*

A. INSUBRICUS INSUBRICUS (Scop.) - Dans la plupart des regions du psys, surtout Iran Occidental et Septentrional. Nuisible aux plantes potagères.

A. INSUBRICUS INFICITUS (Walk.) - Ouest de l'Iran.

A. INSUBRICUS INNOTATUS Uv. _ Sud et Est du pays.

A. LONGIPES LONGIPES (Charp.) _ Sud de l'Iran.

A LONGIPES SUBFASCIATUS B. — Bienko _ Sut _ Est du pays.

12 _ Genre *Pseudoceles I- bol.*

(Syn : THALPOMENA Sauss.)

P. PERSA Sauss. { ab. ROSEIPENNIS / ab. VIOLACEA / ab. COERULEIPENNIS } — Nord de l'Iran.

P. INNORATUS B. — Bienko - Tehran (Elburz).

P. DIRSHI Pop. - Sud de L'Iran : Fars (Kakan, Komehr, Sisakht).

13 _ Genre *Heliopteryx Uv.*

H. HUMERALIS (Kuthy) - Les provinces du Nord.

14 Genre *Sphingonotus Fieb.*

S. ISFAHANICUS Predt. - Esfahan.

S. RUFIPES Predt. _ Yazd, Damghan.

S. MINUTUS Mistsh. _ Nord du Khorassan.

S. THEODORI THEODORI Uv. - Sud _ Ouest du pays.

S. THEODORI IRANICUS Mistsh. - Dans la plupart des régions de l'Iran, exepte Sud - Ouest.

S. MACULATUS MACULATUS Uv. - Nord - Est de l'Iran.

S. RUBESCENS RUBESCENS (Walk.) - Presque dans la plupart des provinces du pays.

S. RUBESCENS FASCIATUS Mistsh. — Tehran.

S. PILOSUS Sauss. - Nord de l'Iran.

S. FUSCUS FUSCUS Predt. - Nord - Ouest de l'Iran : Kordestau.

S. FUSCUS MISTSHENKOI Predt. _ Nord - Ouest du pays.

S. COERULANS CASPICUS Mistsh. - Côtes de la mer Caspienne.

S. COERULIPES COERULIPES Uv. - Nord - Ouest de l'Iran.

S. COERKLIPES KERMANICUS Predt. - Iran Central et Meridional.

S. EURASIUS EURASIUS Mistsh (Syn : S. CALLOSUS Br. - W.) — Nord de l'Iran.

S. SSAVIGNYI Sauss. - Dans la plupart des regions de l'Iran, surtout au Nord.

S. NEBULOSUS DISCOLOR Uv. - Est de l'Iran.

S. NEBULOSUS PERSA Sauss. - Presque dans la plupart des regions du pays.

S. OCTOFASCIATUS (Serv.) - Dans les regions Septentrionales.

S. OBSCURATUS APICALIS Sauss. - Baloutchestan : Bazman.

S. OBSCURATUS BRUNNERI Sauss. - Semnan, damghan, Tehran.

S. DECARINATUS Uv. - Khouzestan.

S. SATRAPES Sauss. - Presque dans la plupart des regions du pays. Nuisible aux cultures, surtout au cotonnier.

S. SALINUS (Pall.) - Azarbaidjan : Le lac Rezaieh

S. PICTIPES Uv. et Dirsh - Tehran : Damavand, Marounak.

15 _ Genre *Vosseleriana Uv.*

V. PARADOXA B.—Bienko - Sud - Est - de l'Iran·

V. PICTA ONEROSA (Mistsh.) - Sud du pays.

V. DENTATA (Predt.)—Sud - Est de l'Iran.

16 - Genre *Sphingoderus B. - Bienko*

S. CARINATUS (Sauss.) — Dans la plupart des provinces du pays. Nuisible aux cultures potagères, surtout au cotonnier.

17 - Genre *Asphingoderus B. - Bienko*

A. UVAROVITES SIMILIS B.—Bienko - Nord - Ouest de l'Iran : Hamadan.

18 - Genre *Helioscirtus Sauss.*

H. MOSERI MOSERI Sauss.— Dans la regions Septentrionales.

H. MOSERI TICHOMIROVI Stshelk. — Nord - Ouest de l'Iran.

H. MORERI SIAZOVI Uv. — Ouest et Sud - Ouest du pays.

19 - Genre *Hyalorsipis Sauss.*

H. TURCMENA Uv. — Nord du Khorassan, Sistan, Baloutchestan.

H. CHESTOPEROVI Uv. — Nord du Kerman.

20 - Genre *Leptopternis Sauss.*

L. GRACILIS (Ev.) — Dans la pluparr des provinces du pays.

21 - Genre *Phaeonotus Pop.*

PH. PULCHER Pop. — Baloutchestan : Bampour, Sarbaz, Saravan.

II - Superfam. TRIDACTYLODEA

C — Fam. TRIDACTYLIDAE

1 - Genre *Pridactylus Oliv.*

T. JAPONICUS Hann. — Ouest et Sud de l'Iran.

T. VARIEGATUS Latr. — Azarbaïdjan.

T. SAVIGNYI Guer. — Azarbaïdjan : Arax.

III - Superfam. TETTIGONIODEA

D - Fam. TETTIGONIIDAE

Subfam · PHANEROPTERINAE

1 - Genre *Phaneroptera Serv.*

PH. FALCATA Poda. — Nord de l'Iran : Gorgan, Mazandaran.

PH. QUADRIPUNCTATA Br. - W. — Baloutchestan.

PH. ROSEATA Walk. — Baloutchestan : Bazman.

PH. CRETACEA Uv. — Baloutchestan, Fars, Mazandaran, Tehran.

2 - Genre *Pseudanerota B. - Bienko*

(Syn : PHANEROPTERA Serv.)

PS. PERSICA Uv. — Baloutchestan, Banar - Abbass.

PS. ROBUSTA B. — Bienko - Sud - Ouest de l'Iran : Lorestan (Khoramabad).

3 - Genre *Nephoptera Uv,*

N. TIBIALIS Uv. — Sud - Est de l'İran : Baloutchestan.

4 - Genre *Trigonocorypha Stal.*

T. ANGUSTATA Uv. — Baloutchestan, Bandar - Abbass (Côtes du Golfe Persique).

5 - Genre *Tylopsis Fieb.*

T. LILIFOLIA Fabr. — Ouest de l'Iran : Kordestan.

6 - Genre *Acrometopa Fieb.*

A. SYRIACA Br. - W. - Ouest de l'Iran : Hamadan.

7 - Genre *Leptophyes Fieb.*

L. TRIVITTATA B — Bienko - Azarbaïdjan, Bakhtiari.

L. IRANICA RAMME. - Tehran, Khorassan Septentrional, Gorgan.

8 - Genre *Orthocercodes B, - Bienko*

O. ZARUDNYI Uv. Sud - Est du pays.

O NESTEROVI Uv. - Kordestan.

9 - Genre *Dasycercodas B. - Bienke*

D IRANICUS B. — Bienko - Fars, Bandar - Abbass.

10 - Genre *Isophya Br. - W.*

I. CASPICA CASPICA Ramme - Côtes de la mer Caspienne (Gorgan, Mazan — daran Guilan, Astara).

I. CHNEIDERI Br. - W. - Azarbaïdjan : Sabalan.

11 - Genre *Isophya Br. - Bienko*

(Syn : Poicilimon Fisch.)

I. RIABOVI Uv. - Côtes de la mer Caspienne, Gorgan.

12 - Genre *Polysarcus Fieb.*

(Syn: Orphania Fisch.)

P. ELBURSIANUS Uv. - Nord du pays : Tehran, Damavand (Souvant nuisible aux plantes potagères)

Subfam. CONOCEPHALINAE

1 - Genre *Homorocoryphus Karny*

H. NITIDULUS Scop. - Nord de l'Iran : Guilan, Racht.

2 Genre *Conocephalus Thunb.*

C. FUSCUS F. — Khorassan, Tehran.

Subfam. TETTIGONIINAE

1 - Genre *Drymadusa Stein.*

D. GRISEA Br. - W. - Nord - Est de l'Iran : Chahroud.

2 - Genre *Phytodrymadusa Uv.*

(Syn : Paradrymadusa Herm.)

PH. HUMERALIS (Uv.)— Azarbaïdjan : Ochnouieh.

PH. RAMMEI (Uv.)— Sud - Ouest de l'Iran.

PH. MIRAMAE (Uv.)— Azarbaïdjan : Tabriz.

PH. KURDA (Uv.)— Kordestan : Khaneh.

PH. SIAZOVI (Uv.)— Azarbaïdjan, Tehran.

PH. BOQUILLONI (Uv.)— Tehran.

3 - Genre *Scotodrymadusa Ramme*

S. PERSA Uv.— Baloutchestan, Tehran (Karadj).

4 - Genre *Bergiola Stsh.*

B. PERSICA Uv. Nord de l'Iran.

5 - Genre *Tettigonia L.*

T. VIRIDISSIMA L.— Dans la plupart des regions de l'Iran. Nuisible dans les champs de cereàles.

T. CAUDATA Ch.—Dans la plupart des régions de l'Iran. Nuisible aux Céréales.

6 - Genre *Campsocleis Fieb.*

G. SHELKOVNIKOVAE Ad. — Nord de l'Iran : Bandar - Chah.

7 - Genre *Platycleis Fieb.*

(Syn : Metrioptera)

P. PERSICA Uv. — Tehran.

P. INTERMEDIA Serv. — Ouest de l'Iran : Kermanchah.

P. AFFINIS Fieb. — Tehran.

P. ESCALERAI IRANICA Ramme.—Dans la plupart des régions du pays. Nuisible aux céréales.

P. IRANICA Ramme. — Tehran.

P. TRIVITTATA B.—Bienko - Hamadan : Assadabad (Alt. 2000—2200 mètres)

P. VITTATA VITTATA Ch. — Nord du pays.

P. CAPITATA Uv. — Nord de l'Iran.

8 – Genre *Dacticus Serv.*

D. ANNALISAE Ramme. — Nord de l'Iran.

D. ALBIFRONS F. — Dans la plupart des provinces du pays. Nuisible surtout aux céréales.

9 – Genre *Medecticus Uv.*

M. ASSIMILIS Fieb. — Ouest de l'Iran : Kermanchah, Lorestan, Khouzestan.

10 – Genre *Uvarovistia*

(Syn : Pholidoptera Wesm.)

U. ZEBRA Uv. — Tehran.

U. SATUNINI Uv. — Tehran.

U. ANGUSTAE Tarb. — Astara, Kachan.

11 – Genre *Psorodonotus Br. - W.*

P. VENOSUS F. - W. — Guilan : Lahidjan.

12 – Genre *Iranusa Uv.*

I. BAMPURA Uv. — Baloutchestan : Bampour.

I. KHORASANA Uv. — Korassan saptentrional : Torbat - heidari.

Subfam. BRADYPORINAE

1 – Genre *Bradyporus Ch.*

B. (CALLIMENUS) LATIPES Stal. — Dans la plupart des régions montagneuses du Nord, Centrale et Méridionale (Fars). Nuisible aux différents cultures.

Subfam. BRADYPORINAE

1 – Genre *Saga Charp.*

S EPHIPPIGERA F. – W.—Azabaïdjan, Kordestan, Fars et les régions Centrales.

Subfam. SCHIZODACTYLINAE

SCH. MONSTRIOSUS — Baloutchestan : Sarbaz.

Superfam. GRYLLODEA

E - Fam. OECANTHIDAE

1 - Genre *Oecanthus Serv.*

O. TURANICUS. Uv. - Nord de l'Iran : Azarbaïdjan, Mazandaran, Gorgan. Nuisible surtout au cotonnier.

O. PELLUCENS Scop. - Iran central et meridional.

F - Fam. GRYLLIDAE

1 - Genre *Gryllus L.*

(Syn : LIOGRYLLUS Sauss.)

G. CAMPESTRIS L. - Azarbaïdjan, Mazandaran.

2 - Genre *Tartàrogryllus Tarb.*

T TARTARUS OBSCURIOR Uv. - Azarbaïdjan : Moghan.

3 - Genre *Gryllulus Uv.*

C BIMACULATUS Deg. - Nord du pays, Kermanchah, Fars.

G. DESRTUS Pall. Presque dans la plupart des regions de l'Iran, Nuisible dans les differentes cultures, surtout il commet des dégâts serieux au cotonnier et aux plantes potagères.

G. DOMESTICUS L. - Commun partout dans les maisons Nuisible sur les denrées alimentaires.

G. BURDIGALENSIS Latr. - Nord de l'Iran. Nuisible surtout au cotonnier.

G. FRONTALIS Fieb. - Nord de l'Iran.

4 Genre *Pteronemobius Jac.*

P. GRACILIS Jac. Sistan.

G - Fam. GRYLLOTALPIDAE

1 Genre *Gryylotalpa Latr.*

G. GRYLLOTALPA L. - Partout Nuisible aux differents cultures.

G. UNISPINA Sauss. - Nord de l'Iran, ainsi que sud du pays. Nuisible aux plantes cultivees.

G. AFRICANA Pall. - Sud de l'Iran. Nuisible aux differentes cultures.



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Par. M. Safavi

Monographie des Hemipteres Heteropteres de l'Iran

(Les espèces nuisibles aux cultures au point de vue éeonomique sont souligneés.)

SUPERFAM. PENTATOMOIDEA Reut. 1910

FAM. CYDNIDAE Billberg, 1820

Subfam. CYDNINAE

1 - Genre *Aethus Dall.* 1851

A. **pilosus** (Herrich-Schäffer, 1834)
Distr. — Baloutchestan (Saravan).

A. **flavicornis** (Fabricius, 1794)
Distr. — Kouzestan (Dezfoul).

2 - Genre *Macroscytus Fieb.* 1800

M. **brunneus** (Fabricius, 1803)
Distr. — Baloutchestan (Sarbaz, Bampour, Iranchahr).

3 - Genre *Cydnus Fabr.* 1803

C. **aterrimus** (Foerster, 1771)
Distr. — Damavand, Ghazvin, Gorgan, Fars (Firouzabad), Kerman, Baloutchestan.

4 - Genre *Geotomus M. R.* 1866

G. **caucasicus cilatifylus** Signoret, 1881
Distr. — Iran d'après Prof. L. Hoberlandt (Terrestrial Hemiptera Heteroptera of Turkey 1955).

5 - Genre *Amaurocoris Stäl,* 1864

A. **curtus** (Brullé, 1838)
Distr. — Baloutchestan (Dachtiari), Sistan (Zabol,).

6 - Genre *Sehirus Am. Serv.* 1843

S. **dubius** (Scopoli, 1763)
Distr. — Iran d'après Prof. L. Hoberlandt (Terre. Hemip. Heter. of Turkey)

S. **dubius** Var. **melanoptera** (Herrich-Schaffer, 1835)
Distr. — Tehran, Karadj.

S. **Coeruleus** (Reuter, 1902).
Distr. — Varamin (Gharaghadj), Khar.

FAM. PENTATOMIDAE Leach. 1815

Subfam. SCUTELLERINAE Lap. 1832

1 - Genre *Irochrotus Am. Serv.* 1843

I. **lanatus** (Pallas, 1773)
Distr. — Varamin (Gharaghadj), Ghasr-chirin.

2 - Genre *Odontotarsiellus Hoberlandt,* 1951

O. **esfandiarii** Hoberlandt, 1951
Distr. — Fars (Neiriz, Halilabad), Sistan (Polgui).
La discription complete de ce punaise a écrit par Prof. L. Hoberlandt dans le livre (Hemiptera Heteroptera from Iran).

3 - Genre *Odontotarsus Lap.* 1832

O. **impictus** Jakovlev, 1885
Distr. — Varamin.

O. **impictus** var. **mendex** Horvath, 1906
Dister. — Arak (Ab barik).

O. **oculatus** Horvath, 1881
Distr. — Fars (yassoudj).

O. **plicatulus** Horvath, 1806
Distr. — Varamin.

O. **purpurleolinatus** (Rossi, 1790)
Distr. — Iran. d'aprés Prof. L. Hoberlandt (Terre. Hemi. Heter of Turkey 1955)

4 - Genre *Ellipsocoris Mayr,* 1864

E. **trillineatus** Mayr, 1864
Distr. — Varamin, Arak, Hamadan, Kermanchah.

E. **tamerlani** Kiritshenko, 1913
Distr. — Varamin.

5 - Genre *Psacasta Germ.* 1863

P. **(Psacasta) exanthematica** (Scopoli, 1763)
Distr. — Varamin, Kermanchah (Ilam).

6 - Genre *Eurygaster Lap.* 1832

E. **integriceps Puton,** 1881
Distr. — Dans la plupart des régions de l'Iran.
Espèce très nuisible aux céréales (le blé et l'orge)

E. **integriceps var. niger Reuter,** 1900
Distr. — Dans la même région de distribution E. integriceps.

E. **maurus** (Linnaeuse, 1758)

Distr. — Gorgan.

Espèce nuisible aux céréales.

Subfam. GRAPHOSOMINAE. Put. 1881

1 _ Genre *Tarisa Am. Serv.* 1843

T. **fraudatrix** Horvath, 1891

Distr. — Azabaïdjan (Cherbian, Moghan,)

2 _ Genre *Ventocoris Hhn.* 1834

V. **(Ventocoris) horvath,** (Puton, 1896)

Distr. — Arak (Ab_barik), Kermanchah.

V. **(Ventocoris) oblongum** Horvath, 1889

Distr. — Varamin.

V. **(Selenodera) fischeri** Herrich_Schäffer, 1851

Distr. — Varamin, Gorgan.

V. **(Selenodera) falcatum** (Cyrillo, 1787)

Distr˙ — Varamin.

3 _ Genre *Ancyrosoma Am. Serv.* 1843

A. **leucogrammes** (Gmelin, 1789)

Distr. — Tehran. Varamin (Taghiabad).

4 _ Genre *Tholagmus Stäl,* 1860

T. **flavolinealus** (Fabricius, 1798)

Distr. — Iran d'après Prof. L. Hoberlandt (Terre. Hemip. Heter. of Turkey)

5 _ Genre *Graphosoma Lap.* 1832

G. **semipunctatum** (Fabricius, 1775)

Distr. — Iran daprès Prof. L. Hoberlandt (Terre. Hemip. Heter. of Turkey)

G. **semipunctatum** var. **Pallida** Bergevin, 1909

Distr. — Ghazvin.

G. **semipungtatum** var. **persicum** Ferrari, 1874

Distr. — Iran d'après Prof. L. Hoberlandt (Terre. Hemip. Heter. of Turkey)

G. **semipunctatum** Var. **confucta** Hoberlandt, 1939

Distr. — Fars (Djahrom), Arak, Karadj.

G. **consimile** horvath, 1903

Distr. — Fars (Darab,) .

G. **melanoxanthum** Horvath, 1903

Distr. — Kerman.

G. **italicum** (Müll. 1766)

Distr.—Tehran (alentour) , Karadj, Babolsar.

Subfam. PENTATOMINAE Stäl 1840

1 _ Genre *Mustha A. S.* 1843

M. **spinosula** (Lafebvre, 1831)

Distr.—Gorgan, Chiraz.

M. **gigantea** Horvath, 1906

Distr.—Baloutchestan (Dachtiari) Fars (Firozabad)

M. **morgani** Horvath, 1906

Distr. Kermanchah (Ilam,)

M. **incana** Stäl, 1876

Baloutchestan (Iranchahr, Sarbaz), Esfahan (Nadjafabad), Kermanchah (Ilam)

2 _ Genre *Apodiphus Spin.* 1837

A. **amygdali** (Germar, 1817)

Distr.—Khach, Tehran, Chahroud.

nuisible aux arbres.

A **integriceps** Horvath, 1888

Distr.—Kerman.

3 _ Genre *Menaccarus H. S.* 1842

M. **arenicola** (Scholtz, 1846)

Distr.—Iran d'après Prof. L. Hoberlandt (Terre. Hemip. Hetre. of Turkey)

4 _ Genre *Carenoplistus*

C. **acutus** (Signoret, 1880)

Distr.—Baloutchestan (Sarbaz), Kerman (Djiroft).

5 _ Genre *Sciocoris Fall.* 1829

S. **umbrinus** (Wolff, 1804)

Distr.—Iran d'après Prof. L. Hoberlandt, (Terre. Hemip. Hetre of Turkey)

6 _ Genre *Mecidea Dall.* 1851

M. **pallida** (Stäl, 1845)

Distr.—Baloutchestan (Sarbaz, Saravan, Mirdjaveh,) Kerman (Bandar_Abbas) Sistan, Fars.

7 _ Genre *Aelia F.* 1803

A. **acuminata** (Linnaeuse, 1758)

Distr.—Azarbïdjan (Moghan, Rézaïeh), Esfahan (Nadjafabad) Fars (Khafrak), Tehran (Alentour), Varamin, Karadj, Kermanshah, Broudjerd,

A **virgata** Klug, 1841

Distr.—Chiraz (Fassa, Khafrak, Arsandjan, Ardakan) Arak, Hamadan, Ghazvin, Zandjan, Kermanchah, Baloutchestan (Pichin), Garmsar, Khar, Varamin (Ghorogh, Gharaghadj).

A. **rostrata** Boheman, 1842

Distr.—Varamin (Gharaghadj, Ghorgan,) Khar, Ghazvin, Esfahan, Kachan, Baloutchestan (Bampour).

A. **furcula** Fieber, 1868

Dister.—Varamin (Gharaghadj, Ghorogh,) Damavand, Saveh, Ghazvin, Zandjan, Hamadan, Kermanchah, Arak, Golpayegan, Ràzaïeh, Gorgan, Machhad (Bodjnourd,) Chiraz (Djahrom,).

Le genre AELIA, est nuisible aux céréales.

8 - Genre *Stagonomus Gorski,* 1852

S. **amoenus** (Brullé 1832)

Distr.—Varamin, Karadj, Gorgrn, Azaraïdjan, (Moghan).

9 - Genr *Stollia Ellenr.* 1862

S. **inconspicua** (Herrich-Schaffer, 1844)

Distr.—Varamin, Chahi, Gorgan (Ramian) Chiraz, Broudjerd, Baloutchestan (Djask),

10 - Genre *Staria Dhrn.* 1860

S. **lunata** (Hahn, 1835)

Distr.—Iran d'après Porf. L. Hoberladt, (Terre. Hemip. Heter., of Turkey)

11 - Genre *Cnephosa*

G. **flavomarginata** Jakovlev, 1880

Distr.—Varamin (Gharaghadj) Karadj, Fars, (Arsandjan, Khafrak,) Kermanchah, Zarand, Kachan, Rézaïeh, Baloutchestan (Bampour,)

12 - Genre *Risibia*

R. **christophi** (Jakovlev, 1880)

Distr.—Varamin.

S. **obscura** (Jakovlev, 1886)

Distr.—Varamin, Khar, Fars (Arsandjan)

13 - Genre *Holcostetus Fieb.* 1866

H. **vernalis** (Wolff, 1804)

Distr.—Varamin.

H. **strictus** (Fabricius, 1803)

Distr.—Kerman.

14 - Genre. *Rhombocoris*

R. **regularis** (Herrich—Schäffer, 1851)
Distr.—Azarbaïdjan (Ardebil,)

15 - Genre. *Agatharchus Stäl* 1876

A. **tritaenia** (Horvath, 1897)
Distr.—Lorestan (Khoramabad), Karadj.

A. **montanus** (Jakovlev, 1879)
Distr.—Varamin (Gharaghadj).

A. **linea** (Klug, 1845)
Distr.—Iran, d'après L. Hoberlandt, (Terre. Hemip. Heter. of Turkey).

16 - Genre *Carpocoris Kol.* 1846

C. **(Carpocoris) pudicus** (Poda, 1761)
Distr.—Chahi, Babol, Babolsar, Gorgan, Chahroud, Varamin.

C. **(Carpocoris) fuscipinus** (Boheman, 1849)
Distr.—Tehran (alentour) Chazvin, Esfahan, Karadj, Babol, Broudjerd, Varamin (Gharaghadj) Damavand, Khar.

C. **(Antheminia) lunulatus** (Goeze, 1778)
Distr.—Varamin (Gharaghadj) Ghazvin, Tehran.

C. **(Antheminia) pusio** Kolenati, 1846
Distr.—Tehran, Varamin.

17 - Genre. *Codophila Mls. R.* 1866

C. **varia** (Fabricius, 1787)
Distr.—Tehran, Varamin (Ghorogh, Gharaghadj), Khar, Karadj.

C. **maculicollis** (Dallas, 1851)
Distr.—Baloutchestan (Sarbaz), Chiraz, Khouzestan, (Ramhormoz).

18 - Genre *Dolycoris Mls. R.* 1866

D. **penicillatus** (Horvath, 1904)
Distr.—Varamin, Baloutchestan (Iranchər) Fars (Ardakan, Estahbanat, Arsandjan,) Kermanchah, Garmsar.

11 attaque aux céréales.

D. **baccarum** (Linnaeus, 1758)
Distr.—Rezaïeh.

19 - Genre *Chroantha Stäl*, 1872

C. **ornatula** (Herrich-Schäffer, 1842)
Distr.—Karadj, Ghom, Kerman (Rafsandjan, Minab, Bandar - Abbas,) Fars

(Bandar-Lengué) Baloutchestan (Bahoucalat, Pichin,).

20 _ Genre *Brachynema Mls. R.* 1852

B. **virens** (Klug, 1845)

Distr. — Baloutchestan, Gharaghadj; Khar, Gorgan,

B. **virens** var. **alternatum** Horvath, 1899

Distr. — Baloutchestan (Saravan,)

B. **cinctum** var. **fevatum** Horvath, 1896

Distr. — Sistan. (Zabol,) Baloutchestan (Khach,)

21 _ Genre *Bagrada Stäl,* 1862

B. **picta** (Fabricius, 1776)

Distr. — Kermanchah. (Dehloran,).

B. **(Nitilia) abeillei** Horvath, 1936

B. **(Nitilia) . concinna** var, **biramosa**, Horvath, 1936

Distr. — Iran.

Les deux dernieres sont d'apres Prof. L. Hoberlandt. (Terre. Hemip. Heter. of Turkey)

22 _ Genre *Pseumatocoris*

P. **ignitus** Kiritschenko, 1922

Distr. — Kermanchah, (Dehloran ,).

23 _ Genre *Acrosternum Fieb.* 1860

A. **millieri** (Mulsant et Rey, 1866)

Baloutchestan (Sarbaz).

A. **heegeri** Fieber, 1861

Baloutchestan (Sarbaz).

24 _ Genre *Nezara Am. Serv.* 1843

N. **viridula** (Linnaeus, 1758)

Distr. — Mazandaran, Babolsar, Djahrom, Djiroft,

N. **viridula** var. **troquata** (Fabridius, 1775)

Distr. — Gorgan, Bandar - Gaz, Dezfoul,

N. **viridula** var. **smaragdula** (Fabricius, 1775)

Distr. — Mazandaran, Gorgan, Bandar - Gaz.,

Le genre Nezara est nuisible aux agrumes et cotonniers.

25 _ Genre *Piezodorus Fieb.* 1860

P. **rubrofasciatus** (Fabricius, 1787)

Distr. — Baloutchestan (Pichin,)

P. **lituratus** (Fabricius, 1894)

Distr.—Iran, d'aqrès L. Hoberlandt, (Terre. Hemip. Heter. of Turkey)

26 - Genre *Pausias Jak.* 1905

P. **martini** Puton, 1890

Distr.—Tehran (alentour), Varamin, Kachan, Esfahan, Chahroud, Chiraz (Arsandjan), Kerman, Damavand, Bakhtiari.

Nuisibles aux arbres fruitiers.

27 - Genre *Rhaphigaster Lap.* 1832

R. **nebulosa** (Poda, 1761)

Distr.—Tehran, (Alentour) Zandjan, Lorestan (Khoram - abad), Chahi,

28 - Genre *Eurydema Lap.* 1832

E. **(Eurydema) ornatum** (Linnaeus, 1758)

Distr.—Varamin, Karadj, Gorghan, Chiraz, Kerman,

E. **(Eurydema) ornatum** var. **pictum** (Herrich - Schaffer, 1830)

E. **(Eurydema) putoni** var. **coloratum** (Jakovlev, 1881)

E. **(Horvatheurydema) fieberi** var. **Caucasicum** (Jakovlev 1873)

Distr.—Iran

Les trois dernieres sont d' après Prof. L. Hoberlandt (Terre. Hemip. Hetre. of Turkey).

Le genre Eurydema est nuisible aux differentes plantes de la famille Crucifèrs

Subfam. ASOPINAE Dall. 1851

1 - Genre *Andrallus*

A. **spinidens** (Fabricius, 1787)

Distr.—Khouzestan (Dezfoul,)

2 - Genre *Jalla Hhn.* 1832

J. **dumosa** (Linnaeus, 1758)

Distr.—Iran. d'aprés Prof. L. Hobertandt (Terre. Hemip. Heter. of Turkey)

3 - Genre *Zicrona Am. Serv.*1843

Z. **coerulea** (Linnaeus, 1758)

Distr.—Kachan, Esfahan, Fars (Sisakht: col de Bijin)

Subfam. PHYLLOCEPHALINAE Dall. 1851

1 - Genre *Schizops Spin.* 1837

S. **aegyptiaca** (Lefebvre, 1831)

Baloutchestan (Sarbaz), Sistsn (Zabol).

2 - Genre *Phyllocephala Lap.* 1832

P. **albicornis** Horvath, 1911

Distr. — Sud de l'Iran Minab, Biaban (Côte du Golf. persique)

Subfam. DINIDORINAE Stäl. 1870

1 - Genre *Aspongopus Lap.* 1832

A. **vidiatus** (Fabriciur, 1794)

Distr. — Sud de l'Iran: Baloutchestan, (Sarbaz, Tchahbahar) Minab, Khouzestan (Ahvaz,).

Il attaque aux cultures patagères.





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Par.: F. Taghizadeh

Liste Des Rongeures de L'Iran, et Leurs Distribution.

ORDRE : GLIRES Linnaeus

(Rodentia Vieq. D'azyr)

1 _ Fam. _ SCIURIDAE

Genre : *Sciurus L.*

1 — SCIURUS PERSICUS Erxleben (1777)

Nom local: Sandjab

Distr.: Dans les forêts du Nord et Nord — Ouest.

Genre : *Funambulus*

2 — FUNAMBULUS PALMARUM L.

Nom local: Herdouk

Distr.: Baloutchestan (Sarbaz)

Genre: *Spermophilopsis* Blasius.

3 — SPERMOPHILOPSIS LEPTODACTYLUS Licht. (1823)

Distr.: Dacht — Gorgan.

Genre: *Citellus* Oken.

4 — CITELLUS (COLOBOTIS) FULVUS HYPOLEUCAS Satunin (1909)

Nom local: Kalahou (En Khorassan)

Distr. : Nord du pays: Nichabour (Sar — Velayate), Ghoutchan, Zandjan (Amid — abad, Zavajerd, Gheydar, Soltanieh), Hamadan.

Nuisible aux cultures des céréales, dans les régions non irriguées.

2 _ Fam. _ HYSTRICIDAE

Genre: — *Hystrix L.*

5 — HYSTRIX LEUCURA Sykes (1831)

Syn.; H. hirsutirostris Blanford (1834)

Nom local; Tachi (A Tehran et Fars), Bozonghara (En Khorassan), Si_khor (Kerman)

Distr.: Dans toutes régions de l'Iran, exepte au Kavir — Lout.

Nuisible aux plantes potagères.

3 _ Fam. _ MYOXIDAE

Genre : *Glis* Briss.

6 – GLIS GLIS CASPICUS Satun. (1905)

Syn.: Myoxus glis caspicus Satun. (1995)

Nom local: Chacoul (En Guilan), Ochcoul (En Mazandaran)

Distr.; Il est nuisible aux forêts au bord de la mer Caspienne Guilan, Mazandaran et Chahsevar). Il attaque aux olivieres dans la règion Roudbar (Racht).

7 – GLIS GLIS PETWCCII GOODWIN

Distr.; gorgan

Genre : *Dyromys* Thomas.

8 – DYROMYS NITEDULLA Pallas (1778)

Syn.: Mus nitedulla Pallas (1778)

Distr.; Karadj, Fars (Neyriz), Khorassan et Talech.

9 – DYROMYS NITEDULLA PICTUS Bl.

Distr.: Iran (D'après Kuznetzov)

Genre : *Myomimus* Ogn.

10 – MYOMIMUS PERSONATUS Ognev. (1924)

Distr.; Au Nord – Est du Khorassan.

4 _ Fam.: DIPODIDAE

Subfam. - ALLACTAGINAE

Genre : *Allactaga F. Guv.*

11 – ALLACTAGA ELATER STRANDI Heptner (1934)

Syn.: A. elater turkmeni Good - Win (1940)

Distr.; Dach - Gorgan

12 – ALLACTAGA ELATER INDICA GRAY. (1842)

Distr.; Khorassan (ghaen), Tehran (Varamin).

13 – ALLACTAGA ELATER ARALYCHENRIS Satunin (1901)

Syn.: A. aralychensis Satunin (1991)

Distr.; Azarbaîdjan (pol dacht).

14 – ALLACTAGA WILLIAMSI Thos. (1897)

Distr.; Nord - Ouest du pays, Boucher? (Peut - être A. euphratica Thomas.)

Subfam. DIPODINAE

Genre : *Dipus* Brandt.

15 – DIPUS SAGITTA Pallas (1773)

Distr.; Nord de l'Iran.

Genre : *Jaculus* Erxleben

16 – JACULUS JACULUS L.

Syn.: J. loftusi Blanford

Distr.; Sud de l'Iran.

17 – JACULUS ORIENTALIS Erxleben

Syn.: J. blanfordi Murray

Distr.; Sud de l'Iran

5 – Fam. – CRICETIDAE

Subfam. – CRICETINAE

Genre : *Cricetus* Leske.

18 – CRICETUS (MESOCRICETUS) AURATUS Waterhouse (1939)

Distr.; Hamadan et Ardabil (Soula)

Genre : *Cricetulus*

19 – CRICETULUS MIGRATORIUS ISABELLINUS de Eill. (1867)

Distr.; Tehran, Azarbaïdjan (Ardabil et Bilassouvar), Esfahan

En hiver il nourrit par les denrées alimentaires, mais en éte il est nuisible aux plantes potagères près de village.

20 – CRICETULLS PHACUS PALLAS

Distr.; Dacht - Gorgan.

Genre : *Calomyscus*

21 – CALOMYSCUS BAILWARDI HOTSONI Thomas (1920)

Syn.: C. bailwardi mystax Kaschk. (1925)

Distr.; Baloutchestan, Khorassan.

22 – CALOMYSCUS ELBURZENSIS Goodwin.

Distr.; Piedmont Elburz.

Subfam. – GERBELLINAE

Genre : *Meriones* Illiger

23 – MERIONES TRISTRAMI Thomas (1904)

Distr.; Azarbaïdjan (Dacht - Moghan)

24 – MERIONES ZARUDNYI Heptner (1937)

Distr.; Azarbaïdjan (Rezaïeh)

25 – MERIONES PERSICUS Blanford (1876)

Distr.; Tehran, Chemiran, Ghazvin, Esfahan, Arak, Fars, Saveh, Mahalat, Tiroun Il est nuisible aux plantes potagères dans certaines régions.

26 – MERIONES ERYTHROURUS Gray. (1824)

Distr.; Dacht - gorgan, Khozestan, Mogan.

It est nuisible dans les prairies ainsi ainsi qu'au cotonnier.

27—MERIONES VINAGRADOVI Heptner (1951)

Distr.; Azarbaïdjan

28—MERIONES IRANENSIS Goodwin.

Distr ; Maravatapé et Dast Gorgan.

Genre : *Tatera*

29—TATERA INDICA Gray.

Distr.; Khouzestan, Djiroft, Tehran (D'après de Dr. Rousselo)

Il est nuisible aux plantes potagères et cotonniers en Djiroft et Khouzestan.

Genre : *Rhombomys*

30—RHOMBOMYS OPIMUS Lichtenstein. (1823)

Distr ; Dacht Gorgan, Azarbaïdjan (Gorgan et pol - dacht), Sabzvar, Zabol.

Subfam. - MICROTINAE

Genre : *Microtus Schrank.*

31—MICROTUS ARVALIS Pall. (1778)

Syn.: Mus arvalis Pallas. (1778)

Distr.; Nord de l,Iran

32—MICROTUS (BLANFORDIMYS) AFGHANUS Thos. (1912)

Syn.: M. (Phaiomys) afghanus Thomas (1912)

Distr.; Khorassan (Sarakhss)

33—MICROTUS (CHILOTUS) SOCIALIS Pallas (1773)

Syn.: Mus Socalis pallas (1773)

Distr.; Azarbaïdjan (Dacht-Moghan), Ardabil, Karadj, Damavand. Lar?

Nuisible aux céréales dans les règions du Dacht-Moghan, Ardabil et Damavand, mais en Karadj il attaque au betterave.

34—MICROTUS (CHILOTUS) SOCIALIS PARADOXUS Ogn. et Hept. (1928)

Syn.: Arvicola guentheri Scully (1887)

Distr.; Dacht-Gorgan.

35—MICROTUS (CHILOTUS) SOCIALIS IRANI Thomas

Syn.: Microtus irani Thomas

Distr.; Chiraz (Bagh-razi)

36—MICROTUS HYRCANIA Goodwin.

Distr.; Gorgan et Boudjnord

Genre : *Arvicola Lacepedo*

37—ARVICOLA TERRESTRIS PERSICUS de Filippi (1865)

Syn.: A. amphibus (sic.) var. persicus de Filippi

Distr.; Talech, Zandjan, Esfahan, Damavand.

Il est nuisible aux rizières, plantes potagères et fouragères, il se trouve quelquefois dans les maisons (Esfahan).

Genre : *Ellobius Fischer*

38 – ELLOBIUS FUSCOCAPILLUS FUSCOCAPILLUS Blyth. (1841)

Syn.: Georychus fuscocapillus Blyth.

Distr.; Khorassan et Gorgan

39 – ELLOBIUS FOSCOCAPILLUS LUTESCENS Thomas (1897)

Syn.: E. lutescens Thomas

Distr.; Dans les régions centrales (Esfahan) et Ouest du l'Iran.

6 – Fam. – MURIDAE

Genre : *Nesokia Gray*

40 – NESOKIA INDICA Gray. (1832)

Distr.; Tehran (Krardj , Damavand , Varamie , Chahriar) Baloutchestan , Khouzestan, Kerman, Khorassan, Kordestan, Saveh, Ghom.

C'est un éspèce nuisible pour les plantes potagères, luzerne, et les jardins.

41 – NESOKIA INDICA BAILWARDI Thomas (1907)

Distr.; Nord de pays : Bandar-Gaz, Langueroud, Gorgan (au bord de la rivière Atrak.)

42 – NESOKIA INSULARIS Goodwin (1970)

Distr.; Au bord de la mer Caspian.

43 – NESOKIA LEGENDREI Goodwin (1940)

Distr.; Gouladagh (gorgan)

Genre : *Rattus Fischer*

44 – RATTUS RATTUS L. (1778)

Distr.: Teheran, Guilan, Mazandaran, Chahsevar, Khouzestan.

Il attaque aux denrées alimentaires.

Genre : *Mus L.* (1758)

45 – MUS MUSCULUS L. (1758)

Distr.; Dans la plupart des régions de l'Iran.

Il est nuisible surtout aux denrées alimentdires, mais en Bodjnourd il attaque aux plantes cultivées.

46 – MUS MUSCULUS BACTERIANUS

Distr.; Baloutchestan

Genre : *Apodemus Kaup.* (1829)

47 – APODEMUS SYLVATICUS CHORASSANICUS Ogn. et Heptn. (1927)

Distr.: Au Nord du Khorassan et Dacht Gorgan

48—APODEMUS ARIANUS Blanford.

Distr.; Dacht-Gorgan.

7 - Fam. - SPALACIDAE

Genre : *Spalex*

49—Spalax sp.

Distr.; Kachan

8 - Fam. - LAGOMYIDAE

Genre : *Ochotona Link,*

50—OCHOTOOA RUFESCENS Gray. (1842)

Distr.; Kachan, Firouz-Kouh, Damavand, Dacht-Gorgan, Baloutchestan.

9 - Fam. - LEPORIDAE

Genre : *Lepus L.*

51—LEPUS (EULACUS) EUROPAEUS CYRENSIS Satun. (1905)

Distr.; Nord de l'Iran

52—LEPUS EUROPAEUS IRANENSIS Goodwin

Distr.; Tehran.

53—LEPUS TOLAI Pallas (1778)

Distr.; Les regins centrales de l'Iran

En hiver il attaque aux écorces des arbres et en éte il est nuisible aux plantes potagères.

54—LEPUS TOLAI TURCOMANUS (Heptner)

Distr.; Dacht-Gorgan.

55—LEPUS TOLAI DESERTORUM Ognev et Hept.

Distr.; Main Kaleh.

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Résumé *Par: M. Kaussari*

Sur un Diaspine de la région de Chiraz (Iran)

Voraspis adlei Balachowski et Kaussari

Au cours d'une mission dans la région de Chiraz effectuée en compagnie du Dr. Remaudière, chef de laboratoire à l'Institut Pasteur de Paris, nous avons récolté sur les abricotiers une Cochenille, Diaspidina Chionaspiforme, ayant envahi leur feuillage, recouvrant parfois en totalité.

L'attaque ressemblait beaucoup à celle de Tecaspis asiatica Arch. espèce répandue dans le Nord et le Centre de l'Iran; une étude approfondie nous a permis de constater qu'il s'agissait d'une espèce nouvelle du genre Voraspis créé par W. J. Hall pour trois espèces Afro—éthiopiennes : V. carpenteri Laing, V. baufiniae Hall, V. nigeriensis Vayss.

Mais dans la région paléarctique deux espèces ont été rattachées a ce genre : V. nerii New. specifique de Nerium oleander, et V. ceratoniae Marchal dans tout le Nord-africain souvent nuisible à Ceratonia siliqua dont ir provoque la chute partielle du feuillage. Elle vit aussi sur les feuilles de l'olivier et sur les feuilles et les fruits de Argania spinosa au Maroc.

L'espèce découverte dans le Sud de l'Iran (Chiraz) sur l'abricotier (Prunus armeniaca) est la troisième espèce du genre.

La diagnose a été faite dans le volume XIV de la Revue Filippo Silvestri.

Cette espèce se rappoche de Voraspis ceratoniae vivant sur le Caroubier, l'Olivier et l'Arganier en Afrique du Nord, dont elle diffère par la forme de L_1, et nettement plus larges, moins spiniformes, et nettement plus en retrait par rapport à L_2 (au même niveau chez Ceratonia,) L_2 plus robuste et plus généralement étroites et coniques chez Ceratonia, des macropoes submédian nettement moins nombreux sur V_1; la présence de L^3 (absentes chez Ceratonia) et d'autres caractères dans le Revue XIV Fillipo Silvestri.

Voraspis adlei Balachowski et Kaussari

یکنوع آفت جدید روی درخت زردآلو در جنوب ایران

در مسافرت ۱۳۳٤ که باتفاق آقای رمودیر Remaudière جهت مطالعه آفات بجنوب ایران رفته‌بودیم در یکی از باغات شیراز ملاحظه‌شد که درختان زردآلو مورد حمله حشره‌ای ازخانواده Coccidae «شپشکهای نباتی» قرار گرفته‌است ومنظره آلودگی شباهت داشت به Tecaspis asiatica Arch. که درمرکز وشمال ایران وجود دارد ولی پس ازمعاینه دقیق میکرسکوبی معلوم گردید اسپس جدیدی است از ژانر Voraspis .

ژانر مزبور توسط W. J. Hall. کشف شده برای سه اسپس Afro - éthiopiennes که عبارتند از : Voraspis baufiniae Hall.، Voraspis carpenteri Laing. وبالاخره Voraspis nigeriensis Vayss.

اما تاکنون درنواحی Paléarctique ازژانر مزبور دو اسپس وجودداشت که‌یکی V. ceratoniae Marchal که‌حشره مزبور روی خرنوب وزیتون درافریقای شمالی وجود دارد- دیگری V. nerii Newstead. که روی‌خرزهره درافریقای شمالی‌است سومین‌ژانر در ناحیه پاله آرکتیك اسپس اخیر است که باسم V. adlei Bal. et Kaussari نام گذاری‌شده‌است و ازروی‌زردآلو (Prunus armeniaca) درشیراز جمع‌آوری گردیده.

حشره مزبور در دو سطح برگ مخصوصاً درروی گلبرگها چسبیده و ازشیره‌نباتی می‌مکد در اطراف محلی که ثابت شده برگ رنگ طبیعی خود را از دست داده برنگ زرد درمیآید که بخوبی‌مشخص است .

صفات خارجی - سپر ماده بالغ رنگش سفید خالص است فرم سپر بیضی عریض و برجسته‌بوده پوست لاروی‌اول برنگ زردکاهی ودرجلو قرار گرفته قطر سپر ۲ر۲میلیمتر الی دو میلیمتر ونیم است.

پوپاریوم (Puparium) نر کشیده رنگش سفید برفی‌خط برجسته که درطول‌قرار گرفته (Carène) بخوبی‌مشخص‌است پوست لاروی‌اول زردکاهی‌طول‌سپر نریك‌میلیمتراست.

مشخصات میکروسکپی- حشره بالغ بیضی کشیده جلدبدن کاملا غشائی‌است. شاخك مخروطی شکل واز Soie محروم است .

استیگمات قدامی دارای دو غده Peristigmatiques است استیگمات خلفی بدون غده و یا دارای یك غده است . عرض Pygidium ازطول‌آن بیشتراست .

پیژیدیوم (Pygidium) عریض وبطور وضوح عرضش از طولش بیشتراست دارای سه زوج پالت (L_3 - L_2 - L_1) میباشد .

L_1 کاملا ازهم دوربوده ودر کنارپیژیدیومفرورفته‌است کنار داخلی‌آن‌مایل‌واز کنار خارجی طویلتراست کنار خارجی L_1 دندانه‌دار میباشد .

L_2 برجسته، فرمش تقریباً Spatulé است L2b خیلی کوچك مخروطی و گاهی با بریدگیهای کنار پیژیدیوم اشتباه‌میشود .

L_3 بهمان فرم L_2 است اما کمی کوچکتر بوده و L3b نامعلوم است .

خارهای غدد (Epines glandulaires) خاری شکل وتعداد آن بدینقراراست:

بین L_1وL_2 یك‌زوج-بین L_2وL_3 یکزوج روی‌حلقه‌ششم‌یکزوج - روی‌حلقه‌پنجم۳ الی ٤ عدداست وروی‌حلقه چهارم ٤ عد داست. روی‌حلقه‌های‌سوم خارهای غددی تبدیل به‌غده های غددی (Tubercules glandulaires) شده است .

سوراخ آنال‌مدورودرمرکز پیژیدیوم‌قرار گرفته‌قطر آن‌مختصراً بزرگتر ازعرضL_2است درسطح پشتی ماکروپورها (Macropores) استوانه‌ای کوتاه که دهانه آن بیضی‌است روی‌حلقه‌های پیژیدیوم دیده‌میشود وهمچنین‌میکروپورهائی (Micropores) که‌مجرایش نخی شکل است .

درحلقه های ٤و٥ ماکروپورها در دو ردیف روی هم قرار گرفته اما در حلقه‌های ۲و۳ماکروپورهاغیرمنظم‌است ودرناحیه Submédianبجای‌ماکروپورمیکروپوردیده‌میشود.

غدد دور فرجی پنج دسته ومطابق فرمول زیراست :

۲۸ _ ۲۰ (۲۰-۱٦) ۱۰-۸ غشاءِ در ناحیه داخلی بطنی که بسمت L_1 و L_2 کشیده میشود ضخیم میگردد .

سطح بطنی‌سرسینه وهمچنین‌حلقه‌های Prepygidiaux ازغدد مختلف‌مفروش‌شده ومیکروپورهای نخی‌شکل درناحیه رأسی (Cephalique) وسینه اولی (Prothoracique) مخلوط باآن غدد دیده میشوند .

محل انتشار_ بطوریکه ذکرشد این حشره دراطراف شیراز از روی درختان‌زردالو جمع آوری‌شده وممکن‌است درسایر نقاط جنوبی‌یافت گردد خسارت این‌آفت‌زیاد باعث‌ضعف اشجار شده ودرختان‌آلوده مورد حمله حشرات چوبخوار میگردد .

این‌حشره برای‌حق‌شناسی‌ازز‌حمات جناب‌آقای‌احمدحسین‌عدل وزیرسابق کشاورزی وتسهیلاتی که برای‌پیشرفت مطالعات علمی آزمایشگاه نمودند بنام مشارالیه گذارده شده‌است.

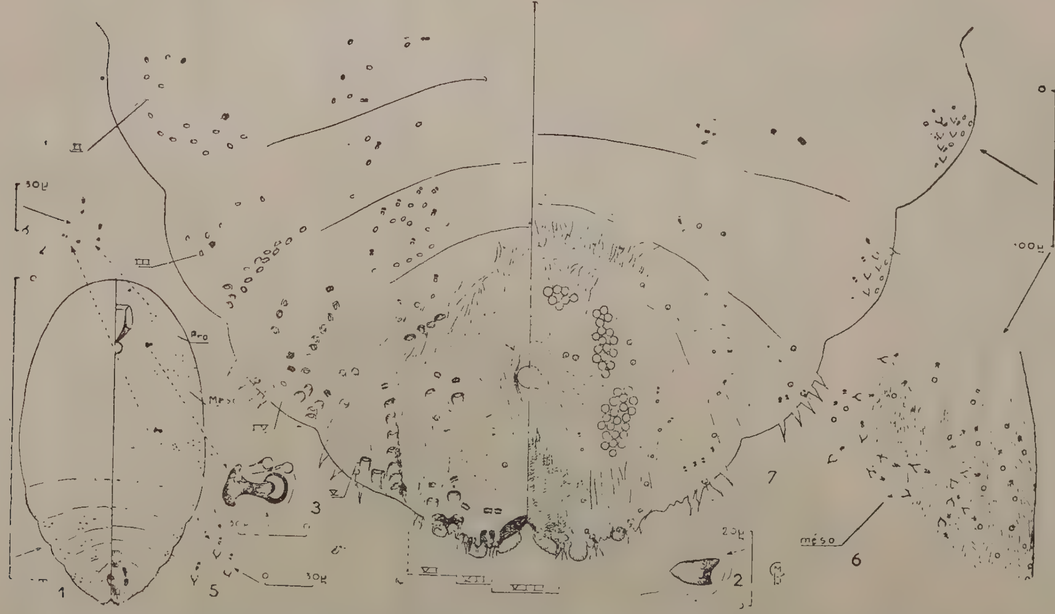


Planche 1

Voraspis Adlei n. † adulte — 1) Caractères généraux microscopiques. 2] id., antenne. 3] id., stigmate antérieur. 4] id., micropores ventraux céphalothoraciques. 5] id. tubercules glaodulaires prépygidiaux. 6) id., zone mésothoracique avec tubercules thoraciques et micropores. 7) Détail de structure du pygidium (d'après Balachowsky et Kaussari 1956)

Summary of Insect Conditions in Iran
1958

R. Q. Gardenhire, Entomologist

Cereal and Forage Insects :

DESERT LOCUST (Shistocerca gregaria) invaded Iran for the first time since 1954 and heavy infestations occurred throughout southwestern and southern Iran. Lesser invasions extended into eastern, central and extreme northwestern Iran. Crop damage was held to a minimum through intensive control efforts. Aggregate acreage reported to have been treated in all areas of Iran totaled 2,765,000 acres.

MOROCCAN LOCUST (Dociostaurus moroccanus) infestations were the heaviest in several years in Fars province and heavy damage to rangelands and wheat occurred, notwithstanding extensive control measures. Heavy infestations also occurred in Gorgan, Khorrasan, Khuzistan and Kerman provinces. Aggregate acreage reported to have been treated in all areas of Iran totaled 2,035,000 acres.

NATIVE GRASSHOPPERS (Calliptamus sp., Dociostaurus spp., and others) infested most areas of Iran. Aggregate acreage reported to have been treated totaled 425,000 acres.

SEN PEST (Eurygaster integriceps) infestations continued at low level and no serious damage to cereals was reported anywhere in Iran.

PENTATOMIDS (Aelia furcula and Aelia virgata) were extremely heavy in several localized areas and caused as much as 50 per cent loss of wheat in Hamadan area.

A PENTATOMID (Dolycoris baccarum) (Det. by P. D. Ashlock) invaded cereal fields near Dezful in Khuzistan, with population densities as high as 70 per square meter reported. No important damage was observed.

SCARAB BEETLES (Anisoplia sp.) were reported very numerous in several areas of western Iran and adults damaged maturing wheat heads.

A WHITE GRUB (near Haplida sp.) (Det. by J. G. Rosen) greatly reduced stands of young cereal plantings in Khuzistan during late winter.

EUROPEAN CORN BORER (Pyrausta nubilalis) (Det. by H. W. Capps) infe-

stations were moderately heavy in the limited plantings of field corn in the Caspian area.

DURRA STEM BORER (Sesamia cretica) was the most important pest of corn and sugarcane throughout Iran, and also in conjunction with a CRAMBID STEM BORER (near Chilo sp.) (Det. by H. W. Capps) caused sevère damage to sorghum in Baloutchestan.

A NOCTUID (Leucania loreyi) (Det. by. H. W. Capps) was of minor importance on corn in southern Iran.

CEREAL LEAF MINER (Syringopais temperatella) became increasingly important on wheat and barley in southwestern and southern Iran, particularly in those areas where cereal and opium crop ròtation had been discontinued. Còmplete destruction of many fields occurred in late winter, with 60 to 90 larvae commonly found per single small plant.

LUCERNE FLEA (Sminthurus viridis) (Det. bv D. L. Wray) was present in great abundance in Khuzistan wheat fields and was also common on wild alfalfa in that area.

ENGLISH GRAIN APHID (Macrosiphum granarium) (Det. by L. M. Russell) infestations were heavy on wheat in southern Iran.

GREENBUG (Toxoptera graminum) (Det. by L. M. Russell) was present on cereals in southern Iran, but was nowhere observed in any abundance.

CORN LEAF APHID (Rhopalosiphum maidis) (Det. by L. M. Russell) infested barley in Khuzistan province.

ARCTIID CATERPILLARS (Arctia sp. and others) (Det by H. W. Capps and W. D. Field) fed extensively on all species of range plants in many areas of Iran and frequently invaded adjoining cereal fields.

ALFALFA WEEVIL (Hypera postica) continued to be much the most serious pest of alfalfa, occurred in all areas of Iran, and generally destroyed the first cutting and caused heavy damage to the second cutting.

SPOTTED ALFALFA APHID (Therioaphis maculata) was occasionally of economic importance causing honey-dewing and much difficulty in harvesting.

SWEETCLOVER WEEVIL (Sitona cylindricollis) adults were extremely abundant on alfalfa in the Karadj area, defoliating many plants.

MIRIDS (Deraeocoris punctulatus) (Det. by P. D. Ashlock) and (Calocoris norvegirus) (Det. by R. I. Sailer) were common on alfalfa in the vicinity

of Tehran and Karaj.

Truck Crop Insects :

SPIDER MITES and APHIDS were probably the most destructive of all pests to truck crops, with no crop escaping serious damage.

BEET ARMYWORM (Laphygma exigua) infestations dropped to a very low level and in most areas no control measures for this pest were required on sugarbeets.

SUGARBEET CROWN BORER (Gnorimoschema ocellatella) was not of economic importance until late summer, but then rapidly increased to where 100 per cent infestation was common.

A SUGARBEET STEM BORER (Lixus incanescens) was generally present but of minor importance.

SPIDER MITES (Tetranychus sp.) were the most important pest of sugarbeets in some of the more arid regions, whereas the BEAN APHID (Aphis fabae) was the most important pest of sugarbeets in the cooler, northern province of Azarbaïdjan.

SPINACH LEAF MINER (Pegomya hyoscyami) (Det. by R. H. Foote) infestations on sugarbeet were the heaviest in several years and caused serious economic damage in many places throughout central Iran.

FLEA BEETLES (Chaetocnema sp.) caused heavy damage to sugarbeets during the young seedling stage.

BALUCHISTAN MELON FLY (Myiopardalis pardalina) and A MELON BEETLE (Epilachna chrysomelina) damaged melons and cucumbers in all areas of Iran.

RED PUMPKIN BEETLE (Aulacophora foveicollis) was observed to be of lesser importance on melons and was seen only in southern Iran.

CABBAGEWORMS (Pieris rapae, Pieris brassicae, and Plutella maculipennis) were common on cabbage with the most serious damage observed being caused by Pieris rapae.

CABBAGE APHID (Brevicoryne brassicae) heavily infested cabbage and cauliflower throughout the country.

A FLEA BEETLE was observed in great abundance on cabbage throughout the season and in all areas.

A PENTATOMID (Eurydema ventrale)—Nymphs were quite abundant on cab-

bage during late summer in Azarbaïdjan province and causing some damage.

TURNIP WEBWORM (Hellula undalis) (Det. by H. W. Capps) damaged cabbage and sometimes caused serious to turnips.

TURNIP APHID (Rhopalosiphum pseudobrassicae) (Det. by L. M. Russell) was extremely heavy on turnips during late winter in Khuzistan province, and also infested wild crucifers.

A CHRYSOMELID (Colaphellus hofti) caused extensive damage to turnip foliage in Khuzistan province.

EUROPEAN CORN BORER (Pyrausta nubilalis) (Det. by. H. W. Capps) infested bell pepper fruits and stems at Shahi on the Caspian Sea.

TOMATO RUSSET MITE (Vasates lycopersici) caused severe russetting and dropping of tomato foliage in Khorramabad, with severe sunscalding of tomatoes resulting.

A TOMATO FRUITWORM (Heliothis armigera) generally attacked tomatoes, but infestations exceeding five per cent were nowhere observed.

SPIDER MITES were the only pest observed on eggplant and caused heavy dropping of foliage in many areas of western and northwestern Iran.

EGYPTIAN COTTONWORM (Prodenia litura) was a major pest of all types of vegetable crops in Khuzistan province.

Deciduous Fruit Insects :

CODLING MOTH (Carpocapsa pomonella) severely infested apples throughout Iran, attacked pears to a lesser extent, and caused only limited damage to quince.

ERMINE MOTHS (Hyponomeuta sp. or spp.) completely defoliated many apple trees in Azarbaïdjan province and caused serious leaf damage in most apple growing areas. Apricot, plum and quince were also infested.

A PRUNE FRUITWORM (Laspeyresia funebrana) infested from 50 to 90 per cent of the prune crop in many areas. Damage to plums was much less severe.

A LACE BUG (Stephanitis pyri) was observed predominately on apples, but also occurred on pears in all fruit growing areas. Damage ranged from light to very severe. In the latter case foliage showed practically no chlorophyll.

SPIDER MITES particularly the CLOVER MITE (Bryobia praetiosa) heavily infested deciduous fruit trees. A prune orchard near Amol in the Caspian Sea area was almost completely defoliated by the CLOVER MITE.

A CERAMBYCID TWIG BORER killed many terminal branches of apricots, cherries, and apples over a wide area of central and western Iran. Attacks were not confined to weakened trees.

SHOT-HOLE BORERS (Scolytus spp.) killed many previously weakened peach, plum, cherry and apricot trees.

OLIVE SCALE (Parlatoria oleae), OYSTERSHELL SCALE (Lepidosaphes ulmi), HALL SCALE (Nilotaspis halli), and a DIASPID SCALE (Chionapis asiatica) were all important pests of deciduous fruit trees.

BLACK SCALE (Saissetia oleae) is reported to be killing many olive trees in the small area of infestation at Rudbar. Intensive control measures are being undertaken by the Iranian government.

Citrus Insects :

A complex of citrus scale insects and the citrus rust mite represent the most important economic pests of Iranian citrus. These occur primarily in the Caspian Sea area. Frequently, heavy infestations of three or four species of scale insects will be found on a single tree. Extensive efforts are being made to reduce this damage, and, in the Caspian citrus growing area more than one and one-half million trees were sprayed during 1958.

CITRUS RUST MITE (Phyllocoptruta oleivora) was probably the most important single citrus pest during the year. Unusually heavy infestations, extensive spread to additional areas, and improper timing of spray or dust applications resulted in the russetting of the entire crop in many groves.

CITRUS RED MITE (Panonychus citri) was common and the most serious damage observed was on citrus nursery stock.

TEXAS CITRUS MITE (Eutetranychus banksi) (Det. by E. W. Baker) was the most common spider mite attacking citrus in the southern parts of Iran.

DICTYOSPERMUM SCALE (Chrysomphalus dictyospermi) was the most widespread of the scale insects in the Caspian region.

CHINESE WAX SCALE (Ceroplastes sinensis) was reportedly becoming more widespread and was causing serious concern in some areas.

PURPLE SCALE (Lepidosaphes beckii), CHAFF SCALE (Parlatoria pergandii), and BLACK PARLATORIA SCALE (Parlatoria zizyphus) were all of major economic importance on citrus along the Caspian Sea.

GLOVER SCALE (Lepidosaphes gloveri), YEW SCALE (Pulvinaria floccifera), ORANGE PULVINARIA SCALE (Pulvinaria aurantii), CITRICOLA SCALE (Coccus paeudomagnoliarum), SOFT SCALE (Coccus hesperidum), YELLOW SCALE (Aonidiella citrina), and CALIFORNIA RED SCALE (Aonidiella aurantii) infested citrus in scattered areas of the Caspian region but were generally more limited in importance.

BLACK SCALE (Saissetia oleae) did not infest citrus, although present on immediately adjoining oleanders.

COTTONY-CUSHION SCALE (Icerya purchasi) was a problem on citrus only in those areas where other host plants adjoining citrus trees were heavily infested.

ORIENTAL YELLOW SCALE (Aonidiella orientalis) was the only scale insect observed to be of importance on citrus in the hot and arid regions of southern Iran.

LEMON BUTTERFLY (Papilio demoleus) (Det. by H. W. Capps) occurred only in scattered areas of southern Iran and was of limited importance.

CITRUS LEAF MINER (Phyllocnistis citrella) was reported to be important in the limited citrus areas of southeastern Iran.

Nut Insects :

Loss of pistachios and almonds to insect pests is extremely heavy each year in Iran. Even though almond production is high, it was not uncommon to find orchards where practically 100 per cent of the nuts were lost to the almond nut borer. The pistachio insect problem is much more complex, with twelve different species of insect pests observed causing major damage in 1958, plus other insects that caused some damage. Reliable sources estimate that 50 per cent of the entire 1958 pistachio crop will be lost to insects, even though several million trees were sprayed by farmers and the Iranian government. This would represent a loss of between 4 and 5 million dollars worth of pistachios. An orchard near Kerman was observed where 95 per cent or more of the pistachio crop was destroyed by a combination of insects.

ALMOND NUT BORER (Eurytoma amygdali) was the most important insect pest on almonds and severe damage to the crop occurred in the large almond producing region of northwestern Iran.

PISTACHIO LEAFHOPPER (Idiocerus stali) (Det. by J. P. Kramer) was considered the most serious pistachio insect until very recent years. This pest was still of primary importance in unsprayed orchards but was of only minor importance where proper control measures were applied.

PISTACHIO PSYLLID (Agonoscena targioni) infestations were very heavy and were not completely controlled even with multiple spray applications. In addition to heavy loss of nuts, severe damage to the bud crop for next year resulted due to extensive leaf - drop.

PISTACHIO NUT BORERS (Eurytoma plotnikovi (Det. by B. D. Burks) and Megastigmus pistaciae) caused very heavy damage in most pistachio orchards throughout Iran. Infestation counts at Kerman showed up to 70 per cent of the nuts in some orchards to be infested.

A GELECHIID NUT BORER (Recurvaria pistacicola) was generally present and caused severe damage to pistachios in April and May. The young larvae penetrated the young nut and destroyed the developing germ before the shell hardened.

A HAIRY CATERPILLAR (Ocneria terebynthina) became much more widespread in Kerman province and caused complete defoliation of pistachios in some unsprayed orchards.

PISTACHIO LEAF MINER (Stigmella (Nepticula) promissa) was observed to have destroyed 50 to 60 per cent of the leaf surface in two orchards at Rafsenjan, resulting in heavy leaf drop and some drying and shriveling of immature nuts.

A SCOLYTID BORER (Chaetoptelius vestitus) (Det. by W. H. Anderson) was quite heavy in some orchards, with as many as six to eight adult beetles being found in the terminal portion of twigs within a distance of 4 to 6 inches. New buds were killed by penetration of the beetle at the base of the buds.

A BUPRESTID BORER (Capnodis cariosa hauseri) caused very serious damage to pistachio trees at Rafsenjan ,30 to 40 per cent of the trees in one orchard were killed by this borer.

A LEPIDOPTEROUS TWIG BORER became more widespread on pistachios and many nuts were destroyed by the penetration of the young larvae into the stem of the nut cluster.

A PISTACHIO SCALE (Lepidosaphes pistaciae) and SPIDER MITE (Tetranychus sp.) populations became very heavy and caused severe weakening of trees in orchards where an incomplete spray schedule was followed.

Grape Insects :

VINE MOTH (Lobesia botrana) caused minimum damage to grapes due to a very effective control program in infested areas.

A GRAPE MOTH (Sparganothis pilleriana) infested grapes in the vicinities of Ghazvin and Tahkestan.

GRAPE ERINEUM MITE (Eriophyes vitis) was common in Azerbaïdjan province, but onlyminor damage was observed.

CICADAS (Cicadatra spp.) infested grape roots in the Hamadan and Kermanshah areas causing an undetermined amount of damage, but sufficient to cause much concern.

Cotton Insects :

SPINY BOLLWORM (Earias insulana) infestations were reported and generally observed to be much less severe than in 1957. This probably may be attributed to more effective control measures, and climatic conditions that were less favorable for build-up.

A COTTON BOLLWORM (Heliothis armigera) caused less damage to cotton in the Caspian region than in 1957. Rarely did boll infestations exceed 25 per cent, and most commonly ranged from 5 to 10 per cent.

SPIDER MITES (Tetranychus spp) were an important pest of cotton in southern Iran and frequently necessitated the application of control measures.

APHIDS, THRIPS and WHITEFLIES were common on cotton causing serious damage in scattered localities.

NOCTUIDS (Laphygma exigua, Prodenia litura, and Xanthodes graellsii) (Det. by. H. W. Capps) attacked young cotton in Khuzistan province, but damage was usually limited.

Forest, Ornamental, and Shade Tree Insects:

AN ERMINE MOTH (Hyponomeuta sp.) completely defoliated many willow trees during the early spring in the Shiraz area.

A TINGID (Monustria inermis) commonly infested poplars in many areas of Iran. Leaf damage was sometimes quite severe.

POPLAR LEAF BEETLE (Melasoma populi) was generally distributed and caused extensive defoliation, particularly of poplar nursery trees, in western Iran.

A POPLAR TRUNK APHID (Phloeomyzus passerinii) was very heavy on the trunks of poplar trees in Borujerd.

POPLAR LEAF APHIDS—Several species attacked the different species of poplar and caused severe honey—dewing.

BUPRESTID BORERS (Capnodis sp.) killed a large percentage of the trees in poplar nurseries at Borujerd. These same borers attacked larger trees to a lesser degree.

GYPSY MOTH (Porthetria dispar), BROWN—TAIL MOTH (Nygmia phaeorrhoea), and SATIN MOTH (Stilpnotia salicis) all occur in the deciduous forests of the Elburz Mountains, but no serious damage was reported nor observed as caused by these pests.

MOROCCAN LOCUST (Dociostaurus moroccanus)—Adult flying locusts completely devastated an area of approximately ten square miles near Kazerun, stripping all leaves from Zizyphus trees and shrubs.

CITRUS BLACKFLY (Aleurocanthus woglumi) was common on Zizyphus throughout Khuzistan province.

COTTONY—CUSHION SCALE (Icerya purchasi) infestations were extremely heavy on maple trees in Babol and was observed in several Caspian localities as very heavy on Spanish broom (Spartium junceum). It is reported that VEDALIA (Rodolia cardinalis) will not attack this scale when it occurs on these host plants.

GREEDY SCALE (Aspidiotus camelliae) killed sections of Euonymus and boxwood hedges in several Caspian Sea localitions.

BLACK SCALE (Saissetia oleae) heavily infested oleander at Ramsar. Sooty-mold associated with this scale was very dense.

Miscellaneous Insects :

OLD WORLD DATE MITE (Oligonychus afrasiaticus) severely damage the date crop in many widely scattered areas of southern Iran.

A DATE FULGORID (Ommatissus binotatus)—Extent of damage not reported, but government control operations were greatly reduced in 1958.

DATE STEM BORER (Oryctes elegans) was reported to be an important pest in Jahrom and Bam areas.

DICTYOSPERMUM SCALE (Chrysomphalus dictoyospermi) was generally light on tea in the Caspian region, however infestations sometimes became puite heavy in densely shaded plantings.

SOFT SCALE (Coccus hesperidum)—Light infestations occasionally found on tea.

SPIDER MITES—A light infestation found on tea at Ramsar.

EUROPEAN CORN BORER (Pyrausta nubilalis) (Det. by H. W. Capps) attacked "Kenaf" (Hibiscus cannabinus), a fiber plant grown for jute, throughout the Caspian region. Infestations averaged about ten per cent. Infested plants usually broke at the point of entry of the borer, and the portion above died. This borer was also found in the stems of Abutilon avicenna, a native malvaceous plant that is grown as a fiber crop in other parts of the world.

A SESAME POD BORER (Antigastra catalaunalis) (Det. by H. W. Capps) was generally distributed in sesame growing areas of Iran and frequently destroyed a high percentage of seed pods.

A SESAME LEAFHOPPER (Circulifer opacipennis) was considered to be the most important pest of sesame in Khuzistan province, destroying large areas or even entire fields of sesame.

A LEAFHOPPER (Oriosus albicinctus) also attacked sesame, but was considered to be much less important.

WHITEFLIES (Bemisia sp.) and SPIDER MITES commonly infested sesame in Khuzistan province.

TOBACCO APHIDS were the most common and serious pest on tobacco. In Azarbaïdjan province extremely heavy aphid infestations caused severe honeydewing of tobacco.

A TERMITE (Amitermes vilis) (Det. by T. E. Snyder) caused heavy damage to building timbers and railroad ties in Khuzistan province.

A TERMITE (Anacanthotermes vagans septentrionalis) (Det, by. T. E. Snyder) was reported to occur throughout Iran, but was not generally considered as causing extensive damage.

Beneficial Insects :

SEN PEST PARASITE (Microphanurus semistriatus)—About 80 million were again artificially reared this year for field release.

VEDALIA (Rodolia cardinalis)—About 22,000, either collected from the field or reared in the insectary, were released for the biological control of COTTONY—CUSHION SCALE.

COCCINELLIDS (Brumus octosignatus, Chilocorus bipustulatus, Adonia variegata, Prophylaea 14—punctata, and Exochomus flavipes) (Det by E. A. Chapin) were important predators of aphids and spider mites.

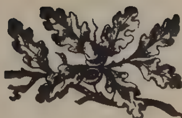
A BRACONID PARASTTE (Phanerotoma sp.) (Det. by C. F. W. Muesebeck) was reared from the SESAME POD BORER (Antigastra catalaunalis).

ICHNEUMONID PARASITES (Dicaelotus sp. and Horogenes sp.) (Det. by L. M. Walkley) were reared from the SUGARBEET CROWN BORER (Gnorimoschema ocellatella).

A PTEROMALID PARASITE (Dinarmus pistaciae) (Det. by B. D. Burks) was reared from the PISTACHIO NUT BORER (Eurytoma plotnikovi).

A BRACONID PARASITE (Bracon brevicornis) (Det. by C. F. W. Muesebeck)—Great numbers were reared from Noctuid larvae.

BRACONID PARASITES (Trioxys utilis and Praon pallitans) continued to effect economic control of SPOTTED ALFALFA APHID (Therioaphis maculata) in all areas of Iran.



by Eng. Mir Salavatian

Herewith is a list of the most common insect pest of commercial crops (sugarbeet, sugarcane, cotton, tobacco, sesame, castor bean, kenaf, and flaxes) in Iran.

Some of these pests have been identified by the Iranian entomologists and the others by foreign entomologists as American, French and Russian from specimens sent to them.

The pests which are underlined have somewhat commercial importance. Therefore research and control with these pests are necessary There are a lot of other pests which are still unknown here in Iran, and it will be necessary to gather specimens for research and study in the future.

List of pests of Cotton, Kenaf, Flax, Sugarbeet, Sugarcane, Tobacco, Sesame and Castor beans:

No	Local name	Scientific name	Family	Order	Infested plants	Season of the maximum infestation	Infested areas
1	Goraz گراز	Sus scrofa L.	Suidae	Nonruminatia	Sugarcane, cotton bolls, sugarbeet, rice stems, garden crops.	September-November	Mazandaran, Khouzestan & most parts of Iran.
2	Djoodje tighi جوجه تیغی	Hystrix leucura Sykes.	Hystricidae	Glires	Sugarbeet, cotton, garden crops etc.	Spring and autumn	most parts of Iran.
3	Mushe Varamin موش ورامین	Nesokia indica Gray.	Muridae	Glires	Sugarcane, cotton bolls, alfalfa roots etc.	Spring - autumn	most parts of Iran.
4	Mushe siah موش سیاه	Rattus rattus L.	Muridae	Glires	Cotton seed, sesame stored seed.	Entire year	Tehran Khouzestan & Mazandaran
5	Mushe khanegi موش خانگی	Mus musculus L.	Muridae	Glires	Cotton seed, sesame, stored seed.	Entire year	most parts of Iran.
6	Mushe sahraï موش صحرائی	Tatera indica	Cricetidae	Glires	Cotton bolls, Sugarcane, stems sesame, garden crops.	August - November	Khouzestan
7	Mushe dom ghermez موش دم قرمز	Meriones erythrourus Gray.	Cricetidae	Glires	Cotton bolls, garden crops.	Summer & autumn	Gorgan Khouzestan
8	Mushe Iran موش ایران	Meriones persicus Bl.	Cricetidae	Glires	Garden crops, Sugarbeet, cereals.	Summer & autumn	Around Tehran Ghazvin, Arak & Golpayegan

9	Mushe Moghan موش مغان	Microtus socialis Pall.	Cricetidae	Glires	Sugarbeet.	Summer & autumn	Mogh an, Karadj, Demavand.
10	Gonjeshk sahraï گنجشك صحرائی	Passer hispaniolensis Tschusi.	Ploceidae	Passeres	Cotton blooms, cotton bolls.	September & October	Khouzestan (Hamidîeh)
11	Ghondj zamestani غنج زمستانی	Agrotis segetum Schiff.	Noctuidae	Lepidoptera	Cotton, sesame, Tobacco sugarbeet roots etc.	Spring	All parts of Iran.
12	....	Agrotis exclamationis L.	Noctuidae	Lepidodtera	Sugarbeet, roots, Cotton roots.	Spring	Most parts of Iran.
13	....	Agrotis ypsilon Rott.	Noctuidae	Lepidoptera	Sugarbeet, cotton, Tobacco roots.	Spring	Most parts of Iran.
14	....	Euxoa conspicua Hb.	Noctuidae	Lepidoptera	Sugarbeet crowns, cereals, cotton.	Spring	North parts of Iran.
15	Caradrina کارادرینا	Laphygma exigua Hb.	Noctuidae	Lepidoptera	Sugarbeet, cotton and many other plants.	Spring – autumn	All parts of Iran.
16	Raheh or Lahah رهه (لهه)	Prodenia litura F.	Noctuidae	Lepidoptera	Cotton, castor beans & leaves of many plants.	Spring, september & october.	Khouzestan
17	Parvaneh gamma پروانه گاما	Phytometra gamma L.	Noctuidae	Lepidoptera	Sugarbeet, cotton, vegetable leaves.	Spring & summer	All parts of Iran.
18	....	Xanthodes graellsii Feisth.	Noctuidae	Lepidoptera	Cotton leaves.	Summer and early autumn.	Khouzestan

19	Kerme saghe کرم ساقه	Sesamia cretica Led.	Noctuidae	Lepidoptera	Sugarcane and sorghum stems	Spring & autumn	Khouzestan, Isfahan, Balutchestan & southern area
20	Kerme ghooseh panbeh کرم قوزه پنبه	Chloridea obsoleta F. (Heliothis armigera Hbn.)	Noctuidae	Lepidoptera	Cotton, Tobacco, Tomato, Kenaf, sesame and pease etc.	Summer & autumn	North and north west Iran
21	....	Chloridea (Heliothis) dipsacea L.	Noctuidae	Lepidoptera	Sugarbeet, alfalfa	Summer	North parts and Khorassan
22	....	Chloridea (Heliothis) peltigera Schiff.	"	"	Cotton & tobacco	Early autumn	Gorgan, south Iran
23	Kerme khardar کرم خاردار	Earias insulana Boisd.	"	"	Cotton, kenaf, Okra & little mallow.	Summer & autumn	South & central Iran
24	Parvaneh kalleh mordeh پروانه کله مرده	Acherontia atropos L.	Sphingidae	"	Sesame	September & october	Khouzestan
25	....	Phycita sp.	Pyralidae	Lepidoptera	Castor bean fruit capsule & castor bean seed.	Spring & autumn	Khouzestan & south area
26	....	Antigasta catalaunalis Dup.	Pyralidae	"	Sesame fruit capsule and leafbuds.	Summer & autumn	Gorgan & Khouzestan
27	....	Pyrausta nubilalis Hb.	"	"	Cotton, Kenaf, and corn.	Summer	Caspian area
28	....	Crocidosema plebejana Z.	Tortricidae	"	Cotton terminal buds	Summer	Mazandaran

29	....	Pyroderces simplex Wlsm.	Tineidae	Lepidoptera	Cotton or decayed cotton bolls,	Autumn	Shushtar, Kazeroun,
30	Lita لیتا	Gnorimoschema ocellatella Boyd.	Tineidae	”	Beet roots, crowns & stipulls	Entire year	Tehran, central area, Fars & Kerman
31	....	platyedra vilella Z.	Gelechiida	”	Cotton, hollyhock Little mallow	Summer	Garmsar & Saveh
32	....	Pectinophora malvella Hb.	”	”	Cotton, hollyhock stem & boll	Summer	RafsanJan
33	....	Pectinophora gossypiella saund.	”	”	Cotton bolls and blooms	Summer	South east parts of Balutchestan
34	Murtche siah biabani مورچه سیاه بیابانی	Cataglyphis sp.	Formicidae	Hymenoptera	Flax seed and fruit capsules.	Summer	Behbahan Khouzestan
35	Magas risheh tchogh-ondar مگس ریشه چغندر	Eumerus strigatus Fall.	Syrphidae	Diptera	Sugarbeet roots	Summer & autumn	Rafsanjan, Bojnurd & Kahrizak
36	....	Desmometopa sp.	Milichiidae	Diptera	Decayed beet roots	Summer & autumn	Bojnurd. Rafsanjan & Karadj
37	....	Scatopse fuscipes Mg.	Scatopsidae	Diptera	Decayed beet roots	Summer & autumn	Bojnurd & Rafsanjan
38	Magas barg tchogh-ondar مگس برك چغندر	Pegomyia hyosciami Panz.	Muscidac	Diptera	Sugerbeet leaf miner	Summer	Most parts of Iran-

39	....	Chortophila(Hylemia) cilicrura Rd.	Muscidae	,,	Cotton and sugarbeet seed and seedling.	Early spring	Most parts of Iran
40	....	Scarites eurytus Fisch. W.	Carabidae	Coleoptera	Cotton, castor bean, sugarcane roots	Spring	Khouzestan
41	....	Melanotus spp.	Elateridae	Coleoptera	Sugarbeet, cotton and castor bean roots.	Spring & summer	North, central Iran & Fars.
42	....	Agriotes spp.	Elateridae	Coleoptera	Sugarbeet, cotton, and castor been roots	Spring & summer	North parts of Iran.
43	....	Carpophilus sp.	Nitidulidae	,,	Decayed beet roots	Summer & autumn	Fassa
44	Allah kolang اللہ کلنگ	Epicauta erythroce- phala Pall.	Meloidae	Coleoptera	Sugarbeet seedling and young leaves.	March & April	Tehran, Varamin & Karaj
45	....	Mylabris calida Pall.	,,	,,	Tobacco flowers, seed beet flowers.	Early spring	Azarbaidjan, Bojnurd & Ghutchan.
46	....	Mylabris bimaculata Klug.	,,	,,	Seed beet flowers	Early spring	Bojnurd & Ghutchan
47	....	Mylabris laticollis Esch.	,,	,,	Seed beet flowers	Early spring	Bojnurd & Ghutchan
48	....	Mylabris ̄ll notata turkestanica Doth.	Meloidae	Colcoptera	Seed beet flowers	Early spring	Bojnurd & Ghutchan

49	....	Omophlus pilicollis Men.	Alleculidae	„	Seed beet flowers	Early spring	Mazandaran & Khorassan
50	....	Opatroides punctu - latus Brullé	Tenebrionidae	„	Cotton seedlings	Early spring	Gorgan & Mazandaran
51	Kake bargui کك برگی	Phyllotreta vittula Redt.	Chrysomelidae	„	Sugarbeet seedlings,	Early spring	Most parts of Iran
52	Kake bargui کك برگی	Chaetocnema breviuscula Fald.	„	„	Sugarbeet, tobacco and seedlings	Early spring	Most parts of Iran
53	....	Podagrica menetriesi Fald.	„	„	Flax seedlings	Early spring	Mazandaran
54	Shebelak شبلك	Podagrica sp.	„	„	Kenaf seedlings	Early spring	Rasht & Lahidjan
55	....	Haltica deserticola glycyrrizae D. Ogl.	„	„	Young coton stems and leaves	Early spring	North Parts of Iran
56	Sarkhortumi sagheh tcho-ghondar سرخرطومی ساقه چغندر	Lixus incanescens Boh.	Curculionidae	„	Sugarbeet stems and leaf stems	Early spring	Karadj & Varamin
57	Sarkhortumi risheh tchoghondar سرخرطومی ریشه چغندر	Bothynoderes punctiven-tris Germ.	„	„	Sugarbeet roots	Early spring	Varamin, around Tehran
58	Sarkhortumi risheh tchoghondar سرخرطومی ریشه چغندر	Chromonotus vittatus Zubk.	„	„	Sugarbeet roots	Early spring	Zarand, Shiraz & Jahrom

59	....	Pentodon idiota Hrbst.	Scarabaeidae	„	Sugarbeet and sugarcane roots	Spring & summer	Khorassan, Khouzestan & around Tehran
60	....	Polyphylla adspersa Motsch.	„	„	Sugarbeet and fruit tree roots	Summer	North parts of Iran
61	....	Polyphylla olivieri Lap.	„	„	Sugarbeet and fruit tree roots	Summer	Around Tehran
62	Sene sabze panbeh سن سبز پنبه	Nezara viridula L.	Pentatomidae	Heteroptera	Cotton bolls, tobacco, castor bean pods and oranges buds.	Early spring, summer	Mazandaran, Jahrom
63	....	Chroantha ornatula H. Sch.	„	„	Sugarbeet flowers	Spring	Karadj
64	Senake tokhme panbeh سنك تخم پنبه	Oxycarenus hyalipennis Cost.	Lygaeidae	„	Cotton bolls, okra pods, and little mallow	Spring, summer, autumn	South parts of Iran & persian Gulf coast.
65	....	Campylomma diversicornis Reuter	Miridae	„	Cotton, castor bean, sesame and garden crops	Spring & summer	Most parts of Iran, Khouzestan
66	....	Adelphocoris lineolatus Goeze.	„	„	Sugarbeet, cotton, alfalfa	Spring & summer	Most parts of Iran
67	Shirinak kondjed شیرینك كنجد	Circulites sp. (Thamnotettix opacus V. Kusn.)	Jassidae	Homoptera	Sesame	Summer & autumn	Khouzestan
68	....	Cicadatra sp.	Cicadidae	Homoptera	Cotton stems	Spring	Mazandaran, Gorgan

69	....	Empoasca sp.	Eupterygidae	”	Cotton leaves	Spring & summer	Most parts of Iran
70	Asalak panbeh عسلك پنبه	Bemisia gossypiperda M.et L.	Aleurodidae	”	Cotton, sesame, castor bean, melons, okra, etc.	Summer & autumn	Fars & Khouzestan
71	Shateh dorosht sabze panbeh شته درشت سبز پنبه	Acyrthosiphon gossypii Mord.	Aphidae (Aphididae)	”	Cotton seedlings	Spring	Mazandaran & Gorgan
72	Shateh baghala شته باقلا	Aphis fabae Scop.	Aphidae	”	Sugarbeet & tobacco	Spring	Most parts of Iran
73	Shateh panbeh شته پنبه	Aphis gossypii Glov.	Aphidae	”	Cotton, sugarbeet, tobacco, sesame and Kenaf	Spring, summer & autumn	Most parts of Iran
74	Shateh aghaghya شته اقاقیا	Aphis laburni Kalt.	Aphidae	”	Sugarbeet, tobacco & kenaf	Spring	North & Central Iran
75	Shateh estabragh شته اصطبرق	Brachyunguis plotnikovi Nev.	”	”	Cotton	Spring	south & central Iran
76	Shateh risheh lubia شته ریشه لوبیا	Trifidaphis phaseoli Pass.	”	”	Sugarbeet and cotton roots	Spring	North and north east Iran
77	Shateh holu شته هلو	Myzus persicae Sulz.	”	”	Cotton and sugarbeet leaves	Spring	North and central Iran
78	Sapardar ghahveï morakabat سپردار قهوه ای مرکبات	Chrysomphalus dictyospermi Morg.	Coccidae	”	Cotton leaves	Spring	Caspian sea area

79	Thrips تریپس	Thrips tabaci Lind.	Thripidae	Thysanoptera	Cotton, tobacco, kenaf & Castor beans	Spring	Most parts of Iran
80	Malakhe shakhak boland ملخ شاخك بلند	Phasgonura viridis - sima L.	Tettigoniidae	Orthoptera (Saltatoria)	Tobacco, sesame, cotton, flax, sugarbeet.	Spring	Most parts of Iran
81	Malakhe sabz shakhak boland ملخ سبز شاخك بلند	Phasgonura caudata Ch.	Tettigoniidae	Orthoptera	Flax, tobacco, sesame, cotton & sugarbeet	Spring	North parts of Iran
82	------------------------	Tettigonia albifrons F.	"	"	Young cotton leaves	Spring	North parts of Iran
83	------------------------	Platycleis spp.	"	"	Cotton & tobacco-	Spring	Most parts of Iran
84	------------------------	Oecanthus turanicus Uv.	Oecanthidae	"	Cotton, tobacco, castor bean, Kenaf & sesame	May to July	Most parts of Iran
85	Sirsirak سیرسیرك	Gryllus (Acheta) bimaculatus Uv.	Gryllidae	"	Cotton stems	May to July	Most parts of Iran
86	Sirsirak سیرسیرك	Gryllus (Acheta) burdigalensis Latr.	"	"	Cotton stems	May to July	Most parts of Iran
87	Sirsirak biabani سیرسیرك بیابانی	Gryllus (Acheta) desertus Pall.	"	"	Sugarbeet, sesame, cotton, tobacco, flax stems.	May to July	Most pasts of Iran
88	Abdozdak Afrighaï آبدزدك افریقائی	Gryllotalpa africans Palisot.	Gryllotalpidae	"	sugarcane, tobacco, cotton, sugarbeet & rice roots	Spring & autumn	South parts of Iran and Khouzestan

89	Abdozdak آبدزدك	Gryllotalpa unispina Sauss.	Gryllotalpidae	”	Tobacco and cotton roots	May to July	North and Central Iran.
90	Abdozdak آبدزدك	Gryllotalpa gryllotalpa L.	”	”	Cotton, tobacco, kenaf, flax and rice roots	May to July	Most parts of Iran
91	....	Tropidopola cylindrica obtusa Uv.	Acrididae	”	Sugarcane and rice leaves	September to October.	Khouzestan
92	Malakhe daryaï ملخ دریائی	Schistocerca gregaria Forsk. ph. gregaria	”	”	many plants	Spring	Southern and central Iran During invasion
93	Malakhe Mesri ملخ مصری	Anacridium aegyptium aegyptium L.	Acrididae	Orthoptera	Cotton leaves	Spring	Most parts of Iran
94	Malakhe Italiaï ملخ ایتالیائی	Calliptamus italicus Italicus L.	”	”	Cotton leaves	Spring	Mazandaran. Azarbaijan, Kermanshahan,
95	....	Calliptamus barbarus cephalotes F. W.	”	”	Cotton leaves	Spring	Most parts of Iran
96	....	Thisoicetrinus pterostichus F. W.	”	”	Cotton and tobacco leaves	Spring	Most parts of Iran
97	....	Thisoicetrus adspersus Redt.	”	”	Cotton and tobacco leaves	Spring	Caspian area
98	....	Thisoicetrus littoralis similis (Br. W.)	”	”	Cotton leaves	Spring	Khouzestan

99	....	Pyrgomorpha conica deserti B. Bienko.	”	”	Cotton leaves	Spring	Most parts of Iran
100	....	Atractomorpha externa B. Bienko.	”	”	Tobacco and Cotton leaves	Spring	South Iran
101	....	Chrotogonus robertsi Kirby.	”	”	Tobacco and Cotton leaves	Spring	South east of Iran
102	....	Pararcyptera microptera transcaucasica (Uv.)	”	”	Cotton leaves	Spring	Caspian area
103	Malakhe Marakeshi ملخ مراکشی	Dociostaurus maroccanus Thunb. ph. gregaria.	”	”	Cotton, tobacco, cereals and Castor bean leaves	Spring	Gorgan, Moghan
104	....	Dociostaurus tartarus Uv.	”	”	Cotton leaves	Spring	Dasht Gorgan
105	....	Chorthippus spp.	”	”	Cotton and tobacco leaves	”	Most parts of Iran
106	....	Duroniella spp.	”	”	Cotton leaves	”	South and south west Iran
107	....	Aiolopus strepens Latr.	”	”	Cotton leaves	”	South Iran
108	....	Hilethera aelopoides Uv.	”	”	Cotton, sesame leaves	”	South Iran

109	Malakhe Asiaï boumi ملخ آسیائی بومی	Locusta migratoria L. ph. solitaria	”	”	Cotton leaves	Spring	Most parts of Iran
110	Malakhe Asiaï mohajer ملخ آسیائی مهاجر	Locusta migratoria L. ph. gregaria	”	”	Cotton leaves	Spring	Gorgan During invasion
111	....	Oedaleus decorus Germ.	”	”	Cotton leaves	”	Most parts of Iran
112	....	Mioscyrtus wagneri rogenhoferi Sauss.	”	”	Cotton leaves	Spring	Dashte Gorgan
113	....	Oedipoda coerulescens L.	”	”	Cotton and tobacco leaves	”	North & West Iran
114	....	Oedipoda miniata miniata Pall.	”	”	Cotton leaves	”	Most parts of Iran
115	....	Acrotylus insubricus (Scop.)	”	”	Cotton leaves	”	Most parts of Iran
116	....	Sphingonotus satrapes Sauss.	”	”	Cotton leaves	”	Most parts of Iran
117	....	Sphingonotus carinatus Sauss.	”	”	Cotton leaves	”	Most parts of Iran
118	Murianeh riz موریانه ریز	Amitermes vilis (Hagen.)	Termitidae	Isoptera	Cotton, sesame roots & dry wood roots:	May to July	Khouzestan & south Iran

119	Murianeh dorosht موریانه درشت	Anacanthotermes (Hodotermes), Vagans septentrionalis (Jac.)	Hodotermitidae	"	Sesame, cotton roots & dry wood	May to July	Khouzestan & south Iran
120	Kaneh risheh کنه ریشه	Rhizoglyphus sp.	Tyroglyphidae	Acarina	Decayed beet roots, Cotton, sesame, tobacco and sugarcane roots	Entire year	Bojnurd, Rafsanjan & Ahvaz
121	Kaneh vash ghuzeh panbeh کنه وش قوزه پنبه	Pediculopsis sp.	Pediculoididae	"	Wormy cotton and cotton bolls	autumn	Moghan
122	Kaneh tar ankabouti کنه تار عنکبوتی	Tetranychus urtica Koch.	Tetranychidae	"	Cotton, sesame, kenaf, sugarbeet, castor bean and tobacco leaves.	summer and early autumn	Most parts of Iran
123	Khar khaki خرخاکی	Porcellio ornatus M. Edw.	Oniscidae	Isopoda	Cotton seedlings	Early spring	North parts of Iran
124	Nematode risheh نماتود ریشه	Meloidogyne marioni (Cornu.)	Heteroderidae	Nematodes	Tobacco, sesame, cotton, tomato, eggplant, garden crop roots.	summer and early autumn	Most parts of Iran especially Khouzestan

Dr. K. Goodarzy, Ph. D. and M. Vaezi.

Insecticides trials for Soun pest

The following report is based on the result of tests obtained in 1958 from several insecticides used by both aerial and ground spraying systems for experimental control of Eurygaster integriceps.

General consideration

The Varamin district, on the outskirts of Tehran (67 kilometres South East of Tehran), where the present experiment was carried out, is located in the heart of the wheat growing area of the central parts of Iran. The region is edged by the Gharaaghadj mountain range on which the Soun over-winters from 1800 up to 2400 metres above sea level. The type of tillable land is of texture clay sandy, The minimum temperature is about 6 degrees centigrade below zero, and the maximum summer temperature reaches as high as 41 degrees centigrade. The elevation is 960 metres above sea level. The wheat is fall sown and irrigated, with one third of the total 20.000 hectars cultivated land placed under barley and the other two thirds devoted to wheat.

In the spring of 1958 (May–June) after extensive surveying of various parts of Varamin, it was evidenced that the density of Soun population in Pazooki and Bahram – Vasat was so low that in most places only one adult Soun was observed in every 30 – 40 square metres. In Bahnam Arab only the Soukhteh area has been heavily infested by Soun, with Jalilabad and Shotor-khar villages being also densely populated. There was a minimum of one and a maximum of four adult Soun per square metre.

Insecticides used were as follows :—

DDT 25% E. C.	DDT 25% Sol.	DDT 75% W. P.
Diazinon	Dipterex,	Chlorothion
Ciba 570	Bayer 4824	Thiodan

Results and discussion

A.— The four following tables show the results of the insecticides trials for adult Eurygaster; the two first deal with ground spraying and the other two with aerial.

Table 1 shows the result of insecticides trial by ground spraying in Varamin (Jalilabad), 1958.

Date	Insecticides used	Actual material per hectar	Density of Soun / square metre	Results
12-15 May, 1958	DDT 25% E. C.	5000 gr.	4	94. 7%
	Dipterex	850 "	3	92. 7%
	Chlorothion	650 "	4	88. 3%
	Bayer 4824	850 "	4	88 %
	DDT 75% W. P.	5000 "	2	84 %
	Diazinon	1000 "	3	71. 6%
	Ciba 570	950 "	2	50. 2%
	Thiodan	1000 "	"	30. 9%

The following table shows the result of mixture of Emulsion DDT with Diazinon and Dipterex.

Table 2—Experimental control with mixed insecticide. Varamin (Jalilabad), 1958

Date	Insecticides used	Actual material per hectar	Density of Soun / square metre	Results
11-15 May, 1958	Dipterex	425 gr.		
	DDT 25% E. C.	2500 "	3	94. %
	Diazinon	5000 "		
	DDT 25% E. C.	2500	4	85. 7%

The plots selected for aerial spraying were situated quite far from each other and spraying was carried out in three repetitions, each replicate being 10 hectars. The insecticides were used both as pure and mixed.

Table 3— Insecticides trial performed with aircraft on the outskirts of Tehran (Varamin villages Shotorkhar and Jalilabad), 1958

Date	Insecticides used	Actual material Per hectar	Density of Soun / square metre	Results
10-15 May, 1958	Dipterex	850 gr.	2	92. 9%
	DDT 25% E. C.	5000 "	2	92. 4%
	DDT 25% Sol	5000 "	3	90. 3%
	Chlorothion	650 "	3	89 4%
	Diazinon	1000 "	3	74. 3%

The experimental control with mixed insecticides against adult Eurygaster Integriceps was also conducted by the aerial method and its results are shown in the following table.

Table 4 - Mixed insecticides trial against adult Soun performed in Varamin by airplane, 1958

Date	Insecticides used	Actual material per hectar	Density of Soun square metre	Results
10-15 May, 1958	DDT 25% E.C.	2500 gr		
	Dipterex	425 "	2	90.6%
	DDT 25% E.C.	2500 "		
	Diazinon	500 "	2	80 %

B. Nymphs control

On May 26, 1958, in order to make an aerial insecticides trial against Soun nymphs, the situation of experimental plots was examined for the density of adult Soun, nymphs and eggs and samples of one square metre from each plot were taken.

At the time of examining, there were three adult Soun and 580 eggs per square metre and no hatched nymphs observed.

A week after when roughly 80 per cent of eggs were hatched the aerial spraying was started. The table below shows the insecticides used and the results obtained.

Table 5 - Insecticides trial with airplane for Soun nymphs - Varamin, 1958

Date	Insecticides used	Actual material per hectar	First counts after 3 days	Second gounts after 10 days
June 2 1958	DDT 25% E.C.	2500 gr.	No nymphs seen	No nymphs seen
	DDT 25% Sol.	2500	"	"
	Dipterex	425	"	Nymphs of 1-3 instar were abundant
	Chlorothion	325	"	"

Result and conclusion :

(a) For adult Eurygaster with ground spraying the DDT 25% E.C. which resulted in a 94.7% mortality rate ranked highly effective and the most economical and convenient to use.

Next were: Dipterex with 92.79% mortality;

DDT 25% Sol. with 90.39% mortality.

(b) In insecticides trial by airplane, Dipterex with a 92.9% mortality rated high, and DDT 25% E.C. with a narrow margin of 92.4% edged it; then was DDT 25% Sol. With 90.3% mortality.

(c) DDT 25% E.C. had a longer lasting effect when compared with Dipterex and several other insecticides used in the experiment. For example, in experimental plots where Chlorothion, Dipterex, Ciba 570, Diazinon, Bayer 4824 and Thiodan were used from a week on there was heavy reinfestation of treated fields; the nymphs started their activities and again contaminated the farms. Thereafter, with a view to preventing destruction of the crops, the fields were sprayed with Emulsion of DDT 25% and DDT 25% Solution. Thus they were cleared from Soun nymphs and the crops saved. But in the plots already sprayed with the Emulsion DDT 25% and DDT 25% Solution, the adult Soun and nymphs were not observed even at the time of harvest.

(d) For nymphs, DDT 25% E.C. and Dipterex were both effective. The effects were noticeably high on Soun nymphs of 1-4 stages, and none or less for 5th instar or newly adult Soun.

(e) The mixed insecticides gave similar results, but non-mixed chemicals were easier to use. The killing effects of mixed insecticides on parasites and predators associated with Eurygaster in experimental plots were also higher. The 1958 outcomes, as was expected, were in accordance with the last four years' results. This is shown in the table below, which tabulates the results of insecticides trials from 1955-1958.

Table 6 - Insecticides trials performed both by grouud and airplane spraying against adult Soun (1955 - 1958)

Insecticide used	Actual material per hectar	Results							
		Ground spraying				Aerial spraying			
		55	56	57	58	55	56	57	58
		Mortality rate (per cent)							
Dipterex	850 gr.	—	—	98.6	92.7	—	—	100	92.9
DDT 25 % E.C.	5000 "	—	—	94.2	92.7	—	—	94.8	92.4
DDT 25 % S.L.	5000 "	—	—	—	—	—	—	—	90.3
Chlorothion	650 "	—	—	94	88.3	—	—	94	89 4
DDT 5 % dust	3000 "	—	—	—	—	—	95	—	—
Malathion	1000 "	65.5	75	86 5	—	68.8	88.5	76	—
DDT 75 % W.P.	5000 "	77.7	83.8	61.5	84	—	—	—	—
Bayer 4824	850 "	—	—	—	88	—	—	—	—
Diazinon	1000 "	75	44.5	72.5	71.6	68.8	—	74	76.2
Toxaphene	2000 "	65.5	68	62.5	—	55	—	67	—
Parathion	1000 "	65	—	—	—	—	—	—	—
DDT 50 % W.P.	5000 "	—	—	61.5	—	—	—	—	—
Ciba	750 "	—	—	—	50.2	—	—	—	—
Lindane	500 "	48.2	—	—	—	—	—	—	—
Aldrin	1000 "	44.1	—	—	—	—	—	—	—
Thiodan	1000 "	—	—	—	30.9	—	—	—	—
Systox	500 "	26.8	—	—	—	—	—	—	—
Chlordane	1000 "	20.1	—	—	—	—	—	—	—
Dieldrin	1000 "	17	—	—	—	—	—	—	—

آزمایش سموم علیه سن گندم

بقلم : دکتر گودرزی ـ مهدی واعظی

در سالهای ۱۳۳۷ ـ ۱۳۳٤ آزمایشهای صحرائی بوسیله هواپیما و ماشینهای سمپاش موتوری و دستی با سموم مختلف روی سن مادر و پوره سن در نواحی مختلف ورامین گرمسار و رفسنجان انجام ونتایج مثبتی از نقطه نظرمیزان تأثیر سم و درصد تلفات اخذ گردیده است بطور کلی اثرات کمی و کیفی در حدود ۲۰ نوع سم مختلف ازنوع حشره کشهای ترکیبی آلی تحت بررسی قرار گرفت و از بین سموم آزمایشی تأثیر د د ت بخصوص بصورت امولسیون و محلول بر روی سن بالغ بینهایت زیاد و درحدود ۹٦ ٪ تخمین میشود . اثر محلول د د ت (سولوسیون) روی پوره های سن ٤ و ٥ کمتر و بین ٦٠ ٪ تا ۷۰ ٪ نوسان مینماید و د د ت ۷٥ ٪ تا حدود ۷/٥ کیلوو د د ت ٥٠ ٪ تا حدود ۱۰ کیلو بصورت پودر مصرف و امولسیون ۲٥ ٪ تا حدود ۲۰ کیلو در هکتار مصرف گردید .

تأثیر سمومی مانند دیپتر کس بینهایت قابل توجه میباشد . ازدیپتر کس (امولسیون ٥٠) درروی سن گندم بمیزان ۱/٥ کیلو درهکتار ودیپتر کس(S . p ٪ ۸۰) (۱) بمیزان ۱/٦ کیلو در هکتار نتایج رضایت بخشی حاصل شده است لیست سمومیکه درطول مدت آزمایش مصرف شده عبارتند از :

۱	د د ت ۲٥ ٪ .E. c	۸۰۰ لیتر
۲	د د ت ۲٥ ٪ sol	۸۳۰ »
۳	د د ت ۷٥ ٪ .w. p	۳۰ کیلو
٤	دیازینون	۲٥۰ لیتر
٥	دیپتر کس	٤۰ »
٦	کلران	۲۰ »
۷	سیبا ٥۷۰	٥۰ »
۸	بایر ٤۸۲٤	۱۰ کیلو

طرز آزمایش ـ عملیات سمپاشی با هواپیما در سطوحی بین ۱/۵ هکتار و حداکثر ۱۰ هکتار، وسیله ماشینهای دستی در قطعاتی بین ¼ هکتار و حداکثر یك هکتار انجام و در هر قسمت یك قطعه بعنوان شاهد انتخاب و هر آزمایش درسه مرحله تکرار گردید .

طرز نمونه گیری ـ در قطعات سمپاشی شده ۱۰ متر مربع بطور اتفاقی انتخاب و در قطعات انتخابی بشرح زیر عملیات نمونه برداری انجام گردید .

۱ ـ نمونه برداری پس ازسه روزبرای کلیه سموم آزمایشی بغیراز د د ت وپس‌از۷ـ۱۰ روز برای قطعاتیکه درآنها د د ت مصرف شده و عملیات نمونه برداری درکلیه قطعات پس از برداشت محصول عملی گردید .

برای محاسبه نتایج حاصله از عملیات آزمابشی سمپاشی از فرمول **Abbott** در شرائط آزمایشگاهـی و فرمول کاهش جمعیت در شرائط صحرائی **Reduction of popalation** استفاده بعمل آمد .

۱ ـ فرمول Abbott

$$۱۰۰ \frac{X - y}{X}$$

توضیح : تعداد درصد سن زنده در قطعات انتخابی برای نمونه برداری = X

y = « « « « سمپاشی شده

۲ ـ فرمول کاهش جمعیت Reduction of Population

$$۱۰۰ \left\{ ۱ - \frac{Ta. Cb}{Tb. ca} \right.$$

توضیح ـ تعداد سن زنده پس‌از سمپاشی در قطعات سمپاشی شده Ta

« « قبل از عملیات سمپاشی در قطعات آزمایشی Tb

« « پس‌از سمپاشی درقطعات شاهد Ca

« « قبل از « « « Cb

نتایج حاصله‌ازآزمایشهائیکه توسط سموم مختلف بروی سن مادر انجام گرفته درچهار جدول زیر خلاصه شده است .

درجدول شماره ۱و۲ نتایج حاصله از عملیات وسیله سمپاشهای زمینی ودر جدول ۳و۴ نیجه آزمایش سموم بوسیله هواپیما نشانداده شده است .

درجدول شماره ۵ نتایج حاصله از سمباشی علیه پوره‌سن وجدول شماره ٦ نمودار نتایج حاصله از سمپاشی توسط هواپیما و ماشینهای دستی طی چهار سال گذشته میباشد

جدول شماره ۱ (آزمایش سموم وسیله ماشینهای موتوری ودستی ورامین ۱۳۳۷)

تاریخ مبارزه	نوع سم مصرفی	مقدار سم خالص در هکتار	تراکم سن در متر مربع	نتیجه مبارزه
۲۵ر۲ر۳۷	ددت ۲۵٪ E.c	گرم ۵۰۰۰	٤	درصد ۹٤/۷
	دیپتر کس	« ۵۸۰	۳	« ۹۲/۷
	کلروتیون	« ٦۵۰	٤	« ۸۸/۳
	بایر ٤۸۲٤	« ۸۵۰	٤	« ۸۸
	ددت ۷۵٪ wp	« ۵۰۰۰	۲	« ۸٤
	دیازینون	« ۱۰۰۰	۳	« ۷۱/٦
	سیبا ۵۷۰	« ۹۵۰	۲	« ۵۰/۲
	تیودان	« ۱۰۰۰	۱	« ۳۰/۹

توضیح

۱ــ سم بایر بشماره ٤۸۲٤ که اخیراً بنام دیپتر کس S.P ۸۰٪) نامیده میشود.

آزمایش سموم مختلط علیه سن گندم وسیله سمپاشهای موتوری دستی (ورامین ۱۳۳۷)

جدول شماره ۲

تاریخ مبارزه	نوع سم مصرفی	مقدار سم خالص در هکتار	تراکم سن در متر مربع	نتیجه مبارزه
۲۰-۲۵ اردیبهشت سال ۱۳۳۷	دیپتر کس ددت ۲۷٪ E.c	گرم ٤۲۵ « ۲۵۰۰	۳	۹٤٪ درصد
	دیازینون ددت ۲۵٪ E.c	« ۵۰۰۰ « ۲۵۰۰	٤	۸۵/۷٪ درصد

آزمایش سموم علیه سن گندم بوسیله هواپیما (ورامین ۱۳۳۷) جدول شماره ۳

تاریخ مبارزه	نوع سم مصرفی	مقدار درصد سم خالص در هکتار	تراکم سن در متر مربع	نتیجه مبارزه
۲۴-۱۹ اردیبهشت	دیپترکس	۸۵۰ گرم	۲	٪ ۹۲/۹ درصد
سال ۱۳۳۷	ددت ٪.۲۵ Ec	۵۰۰۰ «	۲	٪ ۹۲/٤ «
	ددت ٪.۲۵ Sol.	۵۰۰۰ «	۳	٪ ۹۰/۳ «
	کلروتیون	٦۵۰ «	۳	٪ ۸۹/٤ «
	دیازینون	۱۰۰۰ «	۳	٪ ۷٤/۳ «

آزمایش سموم مختلط علیه سن گندم وسیله هواپیما (ورامین ۱۳۳۷)
جدول شماره ۴

تاریخ مبارزه	نوع سم مصرفی	مقدار درصد سم خالص در هکتار	تراکم سن در متر مربع	نتیجه مبارزه
۲۴-۱۹ اردیبهشت	ددت ٪.۲۵ Ec	۲۵۰۰ گرم		٪ ۹۰
سال ۱۳۳۷	دیپترکس	٤۲۵ «	۲	
	ددت ٪.۲۵ Ec	۲۵۰۰ «		
	دیازینون	۵۰۰ «	۲	٪ ۸۰

آزمایش سموم وسیله هواپیما علیه پوره سن گندم (ورامین ۱۳۳۷) جدول شماره ۵

تاریخ مبارزه	نوع سم مصرفی	مقدار درصد سم خالص در هکتار	نتیجه مبارزه سن پس از ۳ روز	نتیجه مبارزه سن پس از ۱۰ روز
خردادماه	ددت ٪.۲۵ Ec	۲۵۰۰ گرم	پوره سن بهیچوجه دیده نشد	پوره سن بهیچوجه مشاهده نشد
سال ۱۳۳۷	ددت ٪.۲۵ Sol.	۲۵۰۰ «	« «	« « «
	دیپترکس	٤۲۵ «	« «	پوره‌های سن ۳-۱ بتعداد کافی درقطعات آزمایشی دیده شد
	کاروتیون	۳۲۵ «	« «	« « «

آزمایش سموم وسیله هواپیما وموتورهای سمپاش علیه گندم (۳۷ - ۱۳۳۴)

جدول شماره ٦

تاریخ مبارزه	نوع سم مصرفی	مقدار درصد سم خالص در هکتار	نتایج حاصله							
			سمپاشی زمینی				سمپاشی هوائی			
			۳٤	۳۵	۳٦	۳۷	۳٤	۳۵	۳٦	۳۷
۱۳۳٤ـ۳۷	دیپتر کس	۸۵۰ گرم	–	–	٪۹۸/٦	٪۹۲/۷	–	–	٪۱۰۰	٪۸۲/۹
	ددت ٪۲۵ Ec	۵۰۰۰ »	–	–	٪۹٤/۲	٪۹۲/۷	–	–	٪۹٤/۸	٪۹۲/٤
	ددت ٪۲۵ S.L.	۵۰۰۰ »	–	–	–	–	–	–	–	٪۹۰/۳
	کلروتیون	٦۵۰ »	–	–	٪۹٤	٪۸۸/۳	–	–	۹٤	۸۹/٤
	ددت ٪۵ پودر	۳۰۰۰ »	–	–	–	–	–	۹۵	–	–
	مالاتیون	۱۰۰۰ »	٦۵/۵	۷۵	۸٦/۵	–	٦۸/۸	۸۸/۵	۷٦	–
	ددت ٪۷۵ w.p.	۵۰۰۰ »	۷۷/۷	۸۳/۸	٦۱/۵	۸٤	–	–	–	–
	بایر ٤۸۲٤	۸۵۰ »	–	–	–	۸۸	–	–	–	–
	دیازینون	۱۰۰۰ »	۷۵	٤٤/۵	۷۲/۵	۷۱/٦	٦۸/۸	–	۷٤	۷٦/۲
	تکزافن	۲۰۰۰ »	٦۵/۵	٦۸	٦۲/۵	–	۵۵	–	٦۷	–
	پاراتیون	۱۰۰۰ »	٦۵	–	–	–	–	–	–	–
	ددت ٪۵۰ w.p.	۵۰۰۰ »	–	–	٦۱/۵	–	–	–	–	–
	سیبا	۷۵۰ »	–	–	–	۵۰/۲	–	–	–	–
	لیندین	۵۰۰ »	٤۸/۲	–	–	–	–	–	–	–
	آلدرین	۱۰۰۰ »	٤٤/۱	–	–	–	–	–	–	–
	تیودان	۱۰۰۰ »	–	–	–	۳۰/۹	–	–	–	–
	سیستوکس	۵۰۰ »	۲٦/۸	–	–	–	–	–	–	–
	کلردان	۱۰۰۰ »	۲۰/۱	–	–	–	–	–	–	–
	دی‌الدرین	۱۰۰۰ »	۱۷	–	–	–	–	–	–	–

بطوریکه ازجداول فوق استنباط میشود.

۱ ـ درمبارزه علیه سن مادر بوسیله سمپاشهای موتوری ودستی باصطلاح سمپاشی زمینی ددت ۰.۲۵٪ Ec تا حدود ۹٤/۷ درصد تلفات وارد ساخته نتایج ثمر بخش حاصل ومصرف سم مزبور توصیه میشود.

در درجه دوم ازمصرف دیپتر کس تا حدود ۹۲/۷۹ درصد نتیجه مطلوب عاید و ددت ۰.۲۵٪ سولوسیون که ۹۰/۳۹ درصد تلفات وارد میسازد در درجه سوم اهمیت قراردارد.

۲ ـ درسمپاشیهای هوائی دیپتر کس از لحاظ میزان در صد تلفات (۹۲/۹ در صد) در درجه اول و ددت ۰.۲۵٪ E.c) امولسیون با اختلاف جزئی (۹۲/٤ درصد) دردرجه دوم وسپس ددت ۰.۲۵٪ سولوسیون با (۹۰/۳ درصد) تلفات در درجه سوم اهمیت قرار دارد.

۳ ـ طول مدت حشره کشی ددت ۰.۲۵٪ همانطور که محقق است درمقام قیاس با سموم فسفره و سایر سموم مشابه طولانیتر و تأثیر سم مداوم میباشد برای مثال در قطعات آزمایشی که کلروتیون، دیپتر کس، سیبای ۵۷۰، دیازینون، بایر ٤٨٢٤ وتیودان مصرفشده‌بودپس‌از یك هفته‌مجدداً سن‌درآنها بتعدادکافی‌بنظرمیرسیدوپوره‌های‌سن‌شدیداًمزارع‌راتهدیدمینمودند بنحویکه برای جلوگیری از وسعت دامنه انتشار آفت ناچارمزارع مجدداً با ددت ۰.۲۵٪ E.c و ددت ۰.۲۵٪ سولوسیون سمپاشی گردید. ولی‌در قطعاتیکه ازابتدا با ددت E.c وسولوسیون سمپاشی شد احتیاج بتجدید سمپاشی نبود.

٤ ـ در مبارزه با پوره سن دیپتر کس و ددت ۰.۲۵٪ امولسیون بر سایر سموم مشابه ارجحیت دارند و تأثیر سم بالاخص بر روی پوره های سن نسل ۱ تا ٤ مشهودتر و اثر آنها بر روی پوره های سن نسل ۵ کمتر میباشد.

۵ ـ از سموم مختلط نتایج تقریباً مشابهی عاید گردید اختلاط سموم از لحاظ تأثیرات منفی که برروی حشرات مفید (پارازیت ها وپرداتور ها) که باسن زندگی مشترك واجتماعی دارند مجملا تحت مطالعه قرار واجرای آن توصیه نمیگردد.

نتایج‌حاصله ازآزمایشهای سال۱۳۳۷با جزئی اختلاف مؤید ومکمل‌آزمایشهای سنوات قبلی بوده وجدول شماره ٦ مبین این امر میباشد.

شماره ۱۸



شهریور ۱۳۳۸

وزارت کشاورزی

آفات و بیماریهای نباتی

نشریه اداره کل بررسی آفات نباتی و قرنطینه

با همکاری اداره کل اطلاعات و روابط عمومی

محل اداره : خیابان سعدی ـ اداره کل بررسیها